

20020914.qrp v02\_n678.qrl.20020914

Date: Sat, 14 Sep 2002 19:03:09 EDT  
From: qrp-l@Lehigh.EDU  
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
Subject: QRP-L digest 2678

QRP-L Digest 2678

Topics covered in this issue include:

- 1) [134966] Re: Elecraft K1 VFO Instability  
by Chuck Adams <k7qo@earthlink.net>
- 2) [134967] FS: K2 sn313  
by "Steve/n0tu" <n0tu@codenet.net>
- 3) [134968] Re: QST on news stands  
by Dave Marling <ve1vq@auracom.com>
- 4) [134969] My simple tribute to ARRL: warning...may seem corny to some...  
by "Bill, N4QA" <n4qa@hotmail.com>
- 5) [134970] Re: QST on news stands  
by Dave Marling <ve1vq@auracom.com>
- 6) [134971] Ref. Datak VFO Kit  
by George Franklin <w0av@juno.com>
- 7) [134972] QST bulk vs. single mailings  
by "Stuart Rohre" <rohre@arlut.utexas.edu>
- 8) [134973] Yeeha! Just got Vietnam with the K1  
by John Harper AE5X <ae5x@qsl.net>
- 9) [134974] How to get needle to sit at zero on SWR meter  
by "Stuart Rohre" <rohre@arlut.utexas.edu>
- 10) [134975] ARRL does appear before Congress and government agencies  
by "Stuart Rohre" <rohre@arlut.utexas.edu>
- 11) [134976] Crystal radios, rolling your own transistors and the whiskers on  
cats.....  
by "Rex Harper" <w1rex@megalink.net>
- 12) [134977] Ref. Datak VFO Kit  
by jacksonharbor@att.net
- 13) [134978] Re: QRP Afield -- 21 September 02  
by "Jay Henson" <aj4ay@worldnet.att.net>
- 14) [134979] Ref. Meter Rubbing  
by George Franklin <w0av@juno.com>
- 15) [134980] Re: Why?  
by "Brian" <brian@iquest.net>
- 16) [134981] Re: ARRL does appear before Congress and government agencies  
by W2AGN <w2agn@w2agn.net>
- 17) [134982] Re: QRP Afield -- 21 September 02  
by Rick McKee <kc8aon@juno.com>
- 18) [134983] Re: Need schottlky diode SPICE model  
by "Joe Everhart" <n2cx@voicenet.com>

- 19) [134984] Re: Could use a little help RE: SWR meters  
by "blinn" <blinn@smgazette.com>
- 20) [134985] Where is everyone?  
by "Karl F. Larsen" <k5di@zianet.com>
- 21) [134986] Who does have the most stable vfo design?  
by "Doug Hendricks" <ki6ds@dph.dpol.net>
- 22) [134987] Saga of the Daiwa SWR meter  
by IamSF5@aol.com
- 23) [134988] VFOs and magnetic fields  
by Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>
- 24) [134989] Need schottlky diode SPICE model  
by "David B. Sarraf" <david.sarraf@paonline.com>
- 25) [134990] RE: QST Free? No, this is no free lunch  
by "Charles Mabbott" <aa8vs@msn.com>
- 26) [134991] fm receiver websites  
by "bill mill" <rvctuy19@hotmail.com>
- 27) [134992] RE: QST Free? No, this is no free lunch  
by "N8IE" <n8ie@woh.rr.com>
- 28) [134993] 18.091, what mode?????  
by Fred Lesnick <flesnick@tbaytel.net>
- 29) [134994] 602 is the older chip, same specs for ham use as 612  
by "Stuart Rohre" <rohre@arlut.utexas.edu>
- 30) [134995] SPICE models  
by Chuck Adams <k7qo@earthlink.net>
- 31) [134996] Re: QST on news stands  
by "Paul Mills" <quahog@localnet.com>
- 32) [134997] Re: Ref. Datak VFO Kit  
by "Tony Fishpool" <tony@g4wif.fsnet.co.uk>
- 33) [134998] Re: Ref. Datak VFO Kit  
by "Mark J. Dulcey" <mark@buttery.org>
- 34) [134999] RE: Ref. Datak VFO Kit  
by "Tracy Markham" <tracy@bytemark.com>
- 35) [135000] Re: QST on news stands  
by "Mark J. Dulcey" <mark@buttery.org>
- 36) [135001] Re: VFOs and magnetic fields  
by "Leon Heller" <leon\_heller@hotmail.com>
- 37) [135002] Re: SPICE models  
by "Leon Heller" <leon\_heller@hotmail.com>
- 38) [135003] Re: 18.091, what mode?????  
by "Karl F. Larsen" <k5di@zianet.com>
- 39) [135004] Re: QRP Afield -- 21 September 02  
by "Karl F. Larsen" <k5di@zianet.com>
- 40) [135005] RE: Who does have the most stable vfo design?  
by Harry Hurst <wa3ptg@comcast.net>
- 41) [135006] Re: VFOs and magnetic fields  
by JOSE VICENTE <vicente@supernet.com.br>
- 42) [135007] TS-520 question  
by Harry Hurst <wa3ptg@comcast.net>

- 43) [135008] DATAK VFO  
by John R Kirby <n3aaz-qrp@juno.com>
- 44) [135009] Re: VFOs and magnetic fields  
by "Karl F. Larsen" <k5di@zianet.com>
- 45) [135010] Re: 602 is the older chip, same specs for ham use as 612  
by "Rod N0RC" <rod@n0rc.us>
- 46) [135011] Re: Why?  
by "John Dorson" <jdorson@worldshare.net>
- 47) [135012] Re: Where is everyone?  
by IamSF5@aol.com
- 48) [135013] Re: Who does have the most stable vfo design?  
by "Brian" <brian@iquest.net>
- 49) [135014] Re: QRP Afield -- 21 September 02  
by W2AGN <w2agn@w2agn.net>
- 50) [135015] My One & Only ARRL Post  
by wkhibbert@juno.com
- 51) [135016] Re: Ref. Datak VFO Kit  
by "Dave Benson" <nn1g@earthlink.net>
- 52) [135017] Re: VFOs and magnetic fields  
by David Hinerman <WD8CIV@worldnet.att.net>
- 53) [135018] Re: Who does have the most stable vfo design?  
by "carl seyresdahl" <carlseye@tampabay.rr.com>
- 54) [135019] Re: DATAK VFO  
by "E. Roswell" <eroswell@monmouth.com>
- 55) [135020] Re: next generation qrp equipment development  
by wb4mnf <wb4mnf@atl.org>
- 56) [135021] [CONTEST] NJQRP Homebrewer Sprint Announcement  
by "Ken Newman" <n2cq@dandy.net>
- 57) [135022] RE: Who does have the most stable vfo design?  
by "Leon Heller" <leon\_heller@hotmail.com>
- 58) [135023] Resistor needed  
by "Vincent A. Santis" <vsantis@earthlink.net>
- 59) [135024] Re: TS-520 question  
by "Paul Mills" <quahog@localnet.com>
- 60) [135025] Re: TS-520 question  
by JD Delancy <W1JD@drix.net>
- 61) [135026] Re: VFOs and magnetic fields  
by Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>
- 62) [135027] Re: VFOs and magnetic fields  
by "Leon Heller" <leon\_heller@hotmail.com>
- 63) [135028] RE: VFOs and magnetic fields  
by Nick Kennedy <nkennedy@tcainternet.com>
- 64) [135029] Fw: QST Free? No, I don't think so.  
by "k8cv" <k8cv@netzzero.net>
- 65) [135030] RE: Who does have the most stable vfo design?  
by k4vib@att.net
- 66) [135031] Fw: [NJQRP] Sept NJQRP meeting  
by "Joe Everhart" <n2cx@voicenet.com>

- 67) [135032] Re: TS-520 question  
by William R Colbert <w5xe@juno.com>
- 68) [135033] Galena doesn't work!  
by "Leon Heller" <leon\_heller@hotmail.com>
- 69) [135034] Re: Why?  
by Bruce Muscolino <w6toy@erols.com>
- 70) [135035] Re: TS-520 question  
by Bruce Muscolino <w6toy@erols.com>
- 71) [135036] Re: Who does have the most stable vfo design?  
by Bruce Muscolino <w6toy@erols.com>
- 72) [135037] Wanted: Drake 2B  
by "Alan Fryer" <N3BJ@hotmail.com>
- 73) [135038] Re: TS-520 question  
by "Rob Matherly" <w0jrm@arrl.net>
- 74) [135039] Re: Galena doesn't work!  
by "Mike Yetsko" <myetsko@insydesw.com>
- 75) [135040] Re: Galena doesn't work!  
by k4vib@att.net
- 76) [135041] Re: Why?  
by Bruce Muscolino <w6toy@erols.com>
- 77) [135042] Re: Ref. Datak VFO Kit  
by "Trevor Jacobs" <kg6cyn@earthlink.net>
- 78) [135043] Re: VFOs and magnetic fields  
by David Hinerman <WD8CIV@worldnet.att.net>
- 79) [135044] Resistor needed  
by "Vincent A. Santis" <vsantis@earthlink.net>
- 80) [135045] Wanted: Drake R4C  
by "Alan Fryer" <N3BJ@hotmail.com>
- 81) [135046] WTD: QRP Homebrewer and QEX.  
by "Vincent Ferme" <vferme@lycos.co.uk>
- 82) [135047] RE: Who does have the most stable vfo design?  
by Ed Manuel <edmanuel@directvinternet.com>

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Date: Fri, 13 Sep 2002 23:06:18 +0100  
From: Chuck Adams <k7qo@earthlink.net>  
To: ki6ds@dph.dpol.net,  
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [134966] Re: Elecraft K1 VFO Instability  
Message-ID: <5.1.0.14.0.20020913225741.00a27a80@mail.earthlink.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

Gang,

In the process of building both the K1 and the K2 I noticed that for a lot of the parts that had instructions to be mounted underneath the board I was able to mount them on the top side.

So if you are building one of the puppies you might want to do what I did. Before placing the part on the underside of the board double check (and make sure you get the right holes and you'll know when you go to solder) to see if the part will go on the top without preventing some other part from being installed properly.

Sorry, I did not make a list of those components for which this will work. Maybe if I sell the rigs and buy two more I can do so and put it on the web page.

FYI. I just got back at 4am this morning from the LAX week long trip. It took me 12 hours to drive from Commerce, CA to Prescott, AZ!! A fuel truck wrecked and closed both lanes of I-10 just west of Indio, CA for a long time. Probably the longest line of backed up traffic ever in human history. :-) So the web page SPICE stuff will be coming this weekend and early Monday. And for those of you interested in wind power you might ask if one of the towers and generators is available on ebay after they have been used in Indio. :-) Forget the idea if you have CC&Rs.....

Chuck Adams, K7QO CP-60 k7qo@earthlink.net  
<http://www.qsl.net/k7qo>

Moving to Arizona? --- Bring your own water, please.

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Date: Fri, 13 Sep 2002 17:11:46 -0600  
From: "Steve/n0tu" <n0tu@codenet.net>  
To: "QRP-L" <QRP-L@lehigh.edu>  
Subject: [134967] FS: K2 sn313  
Message-ID: <005d01c25b7a\$eece2420\$d851f8d1@agilent.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

For Sale: K2 SN313 - w/NB & 160m options, and  
KAF2 audio filter and RT clock It's built but not installed yet.

Works FB! May consider trade for K1 (prefer 4-band)+ diff.

email n0tu@codenet or 719 481-6561 Steve

-----  
Date: Fri, 13 Sep 2002 20:19:22 -0300  
From: Dave Marling <ve1vq@auracom.com>  
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [134968] Re: QST on news stands  
Message-ID: <5.1.0.14.0.20020913201034.020bb938@mail.auracom.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

>  
>There was no August QST at either Barnes & Noble or Border's  
>here in Hyannis, MA., nor is there a Sept. issue...  
>  
>Paul KB1GEJ

And here I was thinking it was a plan to get back at us for sending "The Canadian Amateur" magazine south of the border :)  
Guess I will have to wait for the CD. Or subscribe even!

Paul, are there any radio places around MA/NH/ME besides the Salem, NH place?

Dave  
VE1VQ

-----  
Date: Fri, 13 Sep 2002 19:06:36 -0400  
From: "Bill, N4QA" <n4qa@hotmail.com>  
To: qrp-l@lehigh.edu  
Subject: [134969] My simple tribute to ARRL: warning...may seem corny to some...  
Message-ID: <F885yLZ86BSqEMDpCnJ000006dc@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

First, I admit it...I've been an ARRL basher a few times over my short time in the hobby(37 years)...nothing serious and probably more a reflection of my own personality and beliefs than of any real fault that was owned by HQ...

I'll keep this real short...

There are few (but some) institutions that have had more profound and positive influence in my life than has the American Radio Relay League.

Sure, the League has changed since way back when...what hasn't...

When I included a 'W1AW' command button in a certain PC application alongside the likes of 'CHU', 'WWV' and 'QRP'...well, it was just important to me that I did...I think you understand.

I don't promise that I'll always agree with the ARRL 'line', but I'll always seriously consider remaining an ARRL member...3 years at a time.

73.

Bill, N4QA

<http://www.qsl.net/n4qa/>

ps

Due to spam countermeasures, I see responses via this list's archives and via personal contacts list only.

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Chat with friends online, try MSN Messenger: <http://messenger.msn.com>

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Date: Fri, 13 Sep 2002 20:24:19 -0300

From: Dave Marling <ve1vq@auracom.com>

To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>

Subject: [134970] Re: QST on news stands

Message-ID: <5.1.0.14.0.20020913202341.020c0758@mail.auracom.com>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"; format=flowed

>There was no August QST at either Barnes & Noble or Border's  
>here in Hyannis, MA., nor is there a Sept. issue...

>Paul KB1GEJ

And here I was thinking it was a plan to get back at us for sending "The Canadian Amateur" magazine south of the border :)

Guess I will have to wait for the CD. Or subscribe even!

Paul, are there any radio places around MA/NH/ME besides the Salem, NH place?

Dave  
VE1VQ

-----  
Date: Fri, 13 Sep 2002 18:32:12 -0500  
From: George Franklin <w0av@juno.com>  
To: qrp-l@lehigh.edu  
Subject: [134971] Ref. Datak VFO Kit  
Message-ID: <20020913.183212.-85406787.1.w0av@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Hi Fellers,

I am intrigued by the new \$16.00 DATAK VFO kit but can't find a stocking distributor.

This kit was announced in the current WR magazine which I received a couple of days ago.

Has anyone found a source?

TIA

72 de George/W0AV  
Hamming since '35  
COG#1, PITA#1, SOC#101, K2 SN 550, Etc., (Ad Nauseum)

-----  
Date: Fri, 13 Sep 2002 19:05:55 -0500  
From: "Stuart Rohre" <rohre@arlut.utexas.edu>  
To: <kr1st@amsat.org>, <qrp-l@lehigh.edu>  
Subject: [134972] QST bulk vs. single mailings  
Message-ID: <006601c25b82\$7f30b5d0\$4e100a0a@rohredt2000>

Some months ago, my QST arrived with Post Office damage, (dog eared, torn pages, etc.).

I called Newington, and was assured they would speedily mail a replacement. When it did not arrive in a week, I emailed by SCM and Div. Director. They forwarded my email to Circulation email, and I was assured they had sent a replacement and would send another by first class mail.



Within a couple or three of days, I got 2 copies, one by first class, one by whatever the other class was they had first used---they arrived on the same day.

Whereas first class mail used to take a day from middle of country to coast, now you should allow as much as 5 days I am told.

As to newstand sales of QST, they had started up again for awhile, but with recent losses at Newington from decrease in ads, I doubt it is a viable way to distribute a specialty magazine. As many said, first of all the magazine distributors have to agree to handle it and the returns from dealers. As far as I know they will continue to sell them thru the ham radio stores, by mail order, or those places that have local ham stores. Our Austin Amateur Radio Supply carries QST and most other ham mags. They often have back issues on shelf for months.

Best bargain is to join ARRL, support the legislative efforts they make on behalf of all hams, and get QST for FREE! It also gets you to the members only web pages which have many useful things including early access to some QST future pieces.

72, Stuart K5KVH

Life Member ARRL in progress

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Date: Fri, 13 Sep 2002 20:17:31 -0400  
From: John Harper AE5X <ae5x@qsl.net>  
To: QRP-L <qrp-l@lehigh.edu>  
Subject: [134973] Yeeha! Just got Vietnam with the K1  
Message-ID: <001101c25b84\$1dd69cd0\$6501a8c0@Home>  
MIME-version: 1.0  
Content-type: text/plain; charset=iso-8859-1  
Content-transfer-encoding: 7BIT

XV9DT on 21.002 just "spotted himself" on the DX Summit website. The K1 was on 20m so I quickly hit the Band switch twice, then hit the auto-tuner buttons on it and spun down the dial to his freq. No one else had noticed him yet - got him on the 1st call!

As Austin would say - "Yeah baby. Yeah!"

Now 15 minutes later, the guy is calling CQ and no one is answering him. He's on 21.002 kc, 14 Sept @ 0010 UTC.....

John Harper AE5X

Outdoor QRP: <http://www.ae5x.com>

-----  
Date: Fri, 13 Sep 2002 19:23:51 -0500  
From: "Stuart Rohre" <rohre@arlut.utexas.edu>  
To: <IamSF5@aol.com>  
Cc: <qrp-1@lehigh.edu>  
Subject: [134974] How to get needle to sit at zero on SWR meter  
Message-ID: <007e01c25b85\$009507a0\$4e100a0a@rohredt2000>

Bob,  
When you rub any meter movement faceplate of plastic, and it causes the meter to read up or down scale, that is static charge buildup on the plastic.

Take one of the clothes dryer cloth anti static cling throw aways, and rub it all over the outside of the meter face and see if that does cure it.

The oldest way of curing this was to take off the meter face plate, (many press on the sides) and wash it in dishwasher detergent. Drain excess suds off, and let all bubbles of suds burst, and then without rinsing, let the residue draw clear on the plastic. This too will discharge the static buildup property.

The rubbing with anti static cling clothes dryer cloth is much easier.  
72, Stuart K5KVH

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Date: Fri, 13 Sep 2002 19:33:52 -0500  
From: "Stuart Rohre" <rohre@arlut.utexas.edu>  
To: "W2AGN" <w2agn@w2agn.net>  
Cc: <qrp-1@lehigh.edu>  
Subject: [134975] ARRL does appear before Congress and government agencies  
Message-ID: <008e01c25b86\$6677fcc0\$4e100a0a@rohredt2000>

John,  
there have been numerous stories in QST and in the ARRL newsletters about their officers and staff appearing before Congress, getting sponsors for bills favorable to antennas and amateur radio frequency retention, and other issues of concern to hams SEVERAL times THIS year. I believe you are in

error about them not being able to lobby.

The ARRL set up the ARRL Foundation as the 501c3 organization which might be what you are thinking of. It is for educational purposes.

The grant is to reimburse individuals tuition in taking the on line ARES training course, I know, as I am in that. In turn, I will elmer others taking future courses. It is part of the Homeland Defense initiatives.

Just to set the record straight.

72,

Stuart K5KVB

ARRL member (as is Wayne Green. Just because you do not agree with everything they do, they are the only national association voice we have, as Wayne says.)

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Date: Fri, 13 Sep 2002 20:16:46 -0400  
From: "Rex Harper" <w1rex@megalink.net>  
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [134976] Crystal radios, rolling your own transistors and the whiskers on cats.....  
Message-ID: <003c01c25b84\$0416a9c0\$a83ca43f@stickfarmers>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

QRP-L gangue,

Leon Heller wrote:

I thought my idea was a bit daft, but someone has done it according to this web page:

<http://www.amasci.com/amateur/transis.html>

They weren't very useful devices, but they seem to have had a bit of gain.

Who'll be the first to establish two-way communication with a lead sulphide radio? 8-)

73, Leon

I urge anyone with a curious (yellow?) mind to check out this link! It is

great! I could spend days in this site....

When I was a young lad of 13, I was probably the only person in town checking out the book titled The Amateur Scientist, a compilation of scientific construction articles from Scientific American magazine. When the library withdrew it for lack of circulation, I bought it for 5 cents...and my library card number (with multiple dozens of entries) was the only entry in the fly. I lost it in a move but replaced it (this time for a quarter) from another library book sale.....Sorry, I digress!

This site is a treasure trove of neat stuff....AND I see where they are selling a CD with every Amateur Scientist construction column for 39 bucks!!! Wow! I am sending off for that ASAP, Anyway, I went thru the links for crystal radios, roll your own diodes, caps, and transistors and the juices are really churning. I know where there is a defunct Galena mine about 3 hours from home and 30 minutes from my wife's sister. She can visit and I can prospect for some transistors in the rough! Everybody is happy!

I will post results from my prospecting trip as soon as I can get there. I might even be able to hide some under the seat for distribution. (Another time & another story...)

72,

W1REx Rex Harper "The Tinman"

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Date: Sat, 14 Sep 2002 00:44:02 +0000  
From: jacksonharbor@att.net  
To: qrp-l@lehigh.edu  
Subject: [134977] Ref. Datak VFO Kit  
Message-ID:  
<20020914004403.DJQH15461.mtiwmhc22.worldnet.att.net@webmail.worldnet.att.net>

Gang -

I also saw the item in World Radio - the kit sounds pretty neat, especially since the surface mount part is already soldered.

A few thoughts:

1) The Linear Technology LTC-1799

(<<http://www.linear-tech.com/pdf/1799f.pdf>> for the data sheet)

used in the Datak VFO is a square wave output device, a 5 lead surface mount part - maybe the Datak VFO has some kind of output filtering ?

2) The frequency is set by a resistor - maybe I used the wrong tempco resistors when I tried the LTC-1799, but I recall it not being "crystal replacement" stable - I'd have to check my notebooks for data. Maybe this is an emulation of my old Knight VFO ;)

3) If you can't find the Datak kit, the LTC-1799 is available from Digikey

<<http://www.digikey.com>>

(DK number: LTC1799CS5-ND \$3.25) along with the Surfboard prototyping circuit boards for SOT23-5 parts. Add a power supply, resistor and bypass cap and maybe an output filter and you've got it. The resistor is set by a simple formula - A very easy to use part.

Best Regards,

Chuck Olson, WB9KZY  
Jackson Harbor Press  
<http://jacksonharbor.home.att.net/>

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Date: Fri, 13 Sep 2002 19:50:32 -0500  
From: "Jay Henson" <[aj4ay@worldnet.att.net](mailto:aj4ay@worldnet.att.net)>  
To: <[ki6ds@dph.dpol.net](mailto:ki6ds@dph.dpol.net)>,  
"Low Power Amateur Radio Discussion" <[qrp-l@lehigh.edu](mailto:qrp-l@lehigh.edu)>  
Subject: [134978] Re: QRP Afield -- 21 September 02  
Message-ID: <[004d01c25b88\\$bb6a9740\\$5072560c@default](mailto:004d01c25b88$bb6a9740$5072560c@default)>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

All,

Doug, KI6DS said,  
> Chuck, I implore you to reconsider the rule that does not allow multiple  
> stations to be set up at the same location using different call signs. I  
> have operated many times in qrp field events with several guys, and we  
have  
> set up three or four stations. It is a lot of fun. I don't understand  
the  
> problem that it creates? Please reconsider in the name of fun.

I am inclined to agree with Doug on this. I fail to see or understand the

need for the rule. I guess I must be naive or totally unfamiliar with what has happened in the past during contests.

Seems like a heck of a waste of an opportunity to enjoy the company of others that enjoy operating in a QRP contest.

See you on the radio on the 21st, maybe.

Jay

AJ4AY Mobile, AL

FISTS #7917 ARCI #8131 SOC#220 FP# - 115

-----  
Date: Fri, 13 Sep 2002 19:55:45 -0500  
From: George Franklin <w0av@juno.com>  
To: qrp-l@lehigh.edu  
Subject: [134979] Ref. Meter Rubbing  
Message-ID: <20020913.195546.-1398569.1.w0av@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Hi Gang,

Years ago it was a standard prank when visiting a friends ham shack to rub all the meters on his 6-ft rack-mounted rig with a handkerchief when he wasn't looking.

Then, enjoy the shocked look when he saw all his precious meters hanging at various angles.

Dirty trick? Gess so.

Sorry for the bandwidth.

72 de George/W0AV  
Hamming since '35

-----  
Date: Fri, 13 Sep 2002 20:10:04 -0500  
From: "Brian" <brian@iquest.net>  
To: <w6toy@erols.com>,  
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [134980] Re: Why?  
Message-ID: <00ae01c25b8b\$75eaf770\$55672bd1@bmurrey2K>

MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Oh boy.

Filters on the ready!!

Here it comes.

----- Original Message -----

From: "Bruce Muscolino" <w6toy@erols.com>  
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
Sent: Friday, September 13, 2002 3:33 PM  
Subject: Why?

> Why ooh why is there so much anti ARRL membership sentiment on this  
> list? I find this really curious. Maybe it is an age related  
failure.

-----  
Date: Fri, 13 Sep 2002 21:01:42 -0400  
From: W2AGN <w2agn@w2agn.net>  
To: rohre@arlut.utexas.edu,  
Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [134981] Re: ARRL does appear before Congress and government agencies  
Message-ID: <3D825236.32561.34903A47@localhost>  
MIME-version: 1.0  
Content-type: text/plain; charset=US-ASCII  
Content-transfer-encoding: 7BIT  
Content-description: Mail message body

On 13 Sep 2002 at 19:33, Stuart Rohre wrote:

> John,  
> there have been numerous stories in QST and in the ARRL newsletters about  
> their officers and staff appearing before Congress, getting sponsors for  
> bills favorable to antennas and amateur radio frequency retention, and other  
> issues of concern to hams SEVERAL times THIS year. I believe you are in  
> error about them not being able to lobby.

There is a difference between "appearing before Congress" and Lobbying, but I don't really want to get into it. As several have noted, it is OT, and pisses people off.

BTW, my membership is paid until 2010.

--

/\ /\ /\ /\ /\ John L. Sielke  
( W )( 2 )( A )( G )( N ) <http://www.w2agn.net>  
\\_/\_ \\_/\_ \\_/\_ \\_/\_ \\_/\_ QRPARCI, NJQRP, ARQrp,GQRP,RSGB  
Ex- K3HLU, W7JEF, W4MPC, N4JS

-----  
Date: Fri, 13 Sep 2002 21:09:06 -0400  
From: Rick McKee <kc8aon@juno.com>  
To: qrp-l@lehigh.edu  
Subject: [134982] Re: QRP Afield -- 21 September 02  
Message-ID: <20020913.210920.8686.3.kc8aon@juno.com>

I agree with Doug also, it would be very fun for 2 or more operators to set up at the same location to have friendly personal competition with one another, maybe even have someone there with a scoreboard visible by all participants !

72/73 DE: [K] [C] [8] [A] [0] [N]  
Rick McKee  
Willow Wood, Ohio  
QRP- do more with less !  
QRP-L #2112, FPqrp #33, AR QRP #269

Doug, KI6DS said,  
Chuck, I implore you to reconsider the rule that does not allow multiple stations to be set up at the same location using different call signs.

-----  
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<http://dl.www.juno.com/get/web/>.  
-----



Date: Fri, 13 Sep 2002 21:17:04 -0400  
From: "Joe Everhart" <n2cx@voicenet.com>  
To: "David Hinerman" <WD8CIV@worldnet.att.net>  
Cc: "qrpl" <qrpl-1@lehigh.edu>  
Subject: [134983] Re: Need schottlky diode SPICE model  
Message-ID: <003001c25b8c\$70b73880\$433067cf@n2cxtoy>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Dave,

Thanks very much. And thanks to the others who supplied models  
as well.

Will try to run my simulations this weekend and will report success  
back to the group.

72/73,

Joe E., N2CX

You wrote:

Joe,

Here's a Web page with text for the parameters. I suppose you could edit  
your own model:

-----8< CUT HERE >8-----

SPICE model

The parameters are for a single diode (HSMS-2800). Parameters also apply to  
the individual diodes within multiple diode configurations.

parameterunitsvalue

BV (Vbr)V75

CJOpF1.6

EGeV0.69

IBVA10E-5

ISA3E-8

N-1.08

RSohms30

PB (Vj)V0.65

PT (XTI)-2

M-0.5

-----8< CUT HERE >8-----

Here's the link to the page. It has PDF data sheets as well - including the 1N5711:

<http://rf.rfglobalnet.com/designcenters/hp/products/diodes/hsms280x.htm>

-----  
Date: Fri, 13 Sep 2002 18:28:09 -0700  
From: "blinn" <blinn@smgazette.com>  
To: <IamSF5@aol.com>,  
    "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [134984] Re: Could use a little help RE: SWR meters  
Message-ID: <00dd01c25b8e\$0f9b12e0\$a58aa242@blinn>  
MIME-Version: 1.0  
Content-Type: text/plain;  
    charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Bob,  
If I'm reading between the lines correctly, you need to know how to read SWR on your cross needle meter? I have a Dawai too and find that static does cause the needles to float around a bit. In addition to the dryer static removal stuff, I find that a damp cloth rubbed across the meter face does equally well.

If you've never used a cross-needle meter (and have no instructions) I can see where you might be confused about the "Calibrate" procedure, if you are used to a dual meter or switchable meter where a full scale deflection in forward position is set ("Calibrated") with a potentiometer then the deflection on the second (or reverse) meter will show the correct SWR reading.

With a cross-needle, there is no need to "Calibrate." Instead, a correct reading can be interpreted from the line under the point where the needles cross no matter how high (or low) the forward needle deflects. (This line has the SWR reading printed on it.)

Hope this helps.

Bill - WA7TQK

---

Outgoing mail is certified Virus Free.  
Checked by AVG anti-virus system (<http://www.grisoft.com>).  
Version: 6.0.381 / Virus Database: 214 - Release Date: 8/2/02

— —

Date: Fri, 13 Sep 2002 19:40:02 -0600 (MDT)  
From: "Karl F. Larsen" <k5di@zianet.com>  
To: qrp-l@lehigh.edu  
Subject: [134985] Where is everyone?  
Message-ID: <Pine.LNX.4.44.0209131937260.4038-100000@bucket.dog>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

After dinner I tuned to the beacons on 10 meters and the band is ALIVE! I got on with my FT-817 and called CQ 5 times and not one call. It's another case of open band, no operators. What's new?

— —

72, Karl K5DI

```
| | _ | _ || \ | | | | | \ \ / /  
| | _ | | | . ' | | | _ | | > * <  
| _ _ | _ | | _ \ | \ _ _ _ / / _ \ \
```

Date: Fri, 13 Sep 2002 18:49:15 -0700  
From: "Doug Hendricks" <ki6ds@dph.dpol.net>  
To: <qrp-l@lehigh.edu>  
Subject: [134986] Who does have the most stable vfo design?  
Message-ID: <006401c25b90\$f1b849c0\$4a0b0d0a@dph.dpol.net>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Guys, I wonder who does have the most stable vfo design of the simple rigs? Is it Dave Fifield, Dave Benson, Wayne Burdick, Dick Witzke, Roy Gregson, Rick Littlefield or Jim Kortge? All have designed vfo's for NE602 based single band rigs (Jim Kortge's is not a 602 rig, but it is in the same class

as far as the VFO goes.). Wouldn't it be neat to have a little building exercise on this list? We get the vfo circuits from the following radios:

SWL40+  
K1  
NorCal 40  
Red Hot 40  
Roy Gregson's 40 meter version of his transceiver  
OHR 40 meter rig  
MFJ Cub  
2N2/40

Are there others that I am missing that belong here? Remember we are talking VFO's here NOT VXO's, and to be fair we need to use varactor tuned vfo's.

My first thoughts are that we build them on 2" x 2" pcboard, using Manhattan Construction techniques. That way we don't need pcboards, and everyone can participate who wants to. We use the same spec parts as the original, and then test them to see who has the most stable design. What do you guys think? Would this be a fun exercise or what? Let's talk. 72, Doug

-----  
Date: Fri, 13 Sep 2002 22:02:32 EDT  
From: IamSF5@aol.com  
To: qrp-1@lehigh.edu  
Subject: [134987] Saga of the Daiwa SWR meter  
Message-ID: <ab.221c349f.2ab3f2b8@aol.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="US-ASCII"  
Content-Transfer-Encoding: 7bit

Firs I want to thank all who responded so far.  
Here is the problem.  
I can't ZERO the SWR needle.  
I opened it up and moved the tiny levers and everything works fine.  
However when I go to put the front back on,  
teh SWR needle moves up to 1.7.  
So I left the adjusting screw out and was able to move the lever with a small plastic rod.  
The needle never moves.  
No problem with the power meter.  
I removed the front again and hooked it up to my tuner and it worked FB.  
The only way I can get it to ZERO is to remove the front,adjust the lever to move the needle below the scale then put the front back on.  
BOY,

Ya can't beat a big Wetz meter.  
Any on have one for sale?  
Bob  
AF2Qrp <tm>

-----  
Date: Fri, 13 Sep 2002 19:15:06 -0700  
From: Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>  
To: "'qrp-l@Lehigh.EDU'" <qrp-l@lehigh.edu>  
Subject: [134988] VFOs and magnetic fields  
Message-ID: <7FD24C15A06DD511BF9E00D0B73E9952047A85E7@az33exm05.corp.mot.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="ISO-8859-1"

>\*\*\*\*adjacent placement to a highly ferrous metal  
>  
>ANY metal will cause the problem, nothing especial with ferrous metal.  
>The capacitor pf rise getting close to any conductor, fixing it tight to  
>any surface  
>metal or not may fix the problem. (not to a hot spot).

It is not true that "any metal" will cause problems with your VFO. The real problem is that the VFO produces both an electric field and a magnetic field and that the aluminum is transparent to the magnetic field, allowing the VFO to interact with objects outside the chassis that will react to magnetic energy. Steel objects would be a problem, aluminum objects are not.

I have begun to appreciate that an aluminum enclosure seals out electrical fields (direct RF radiation), but not magnetic fields. I found this out as I tried to use passive LC filters in a DC receiver. In an aluminum chassis, the ferrite "shielded" inductors would pick up transformer 60 Hz, and all sorts of noise from a TV on the other side of the wall. Some of my initial designs used stout active low pass filters to get rid of the 60/120 Hz hum I would get.

With receivers sensitive to 0.1 uV, it does not take much of a magnetic field to get picked up as an annoying audio signal.

Applying this to a VFO, that section would be sensitive to anything that would react to the magnetic field that the VFO is generating. You can test this with a piece of aluminum and your Norcal Paddle base (steel).

If you really want to check the sensitivity to magnetic fields, just try bringing a magnet near your rig and see what that does to your VFO.

Even better.... If you have one of those old tape demagnetizer wands, turn it on and bring that near your rig!

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

-----  
Date: Fri, 13 Sep 2002 22:33:28 -0400  
From: "David B. Sarraf" <david.sarraf@paonline.com>  
To: Joe Everhart <n2cx@voicenet.com>  
Cc: qrp-1@lehigh.edu  
Subject: [134989] Need schottlky diode SPICE model  
Message-ID: <3D829FF8.77702D21@paonline.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Joe:

>From an old but still good student version of PSPICE:

```
.model D1N5711 D(Is=10.58n Rs=32.41 N=1 Xti=5 Eg=.7 Bv=70 Ibv=10u Cjo=2p
+ Vj=.75 M=.3333 Fc=.5 Tt=144.3p)
* 85-??-?? Original library
```

I have other similar numbers. Please let me know if you want them

Dave Sarraf  
N3NDJ

-----  
Date: Fri, 13 Sep 2002 22:43:24 -0400

From: "Charles Mabbott" <aa8vs@msn.com>  
To: qrp-1@lehigh.edu  
Subject: [134990] RE: QST Free? No, this is no free lunch  
Message-ID: <F18Ljjq50K8paSxf9eu00010673@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

>  
>QST is free with membership. The AMA (Academy of Model Aeronautics) does  
>the  
>same thing.  
>You join and one of the perks is the "free" magazine, or you can buy it  
>from  
>a bookstore and not get membership benefits.

This is the same thing for SME, AIIE, CASA, and many other profession societies. You pay XX dollars and get a free magazine. I am not going to naive enough to believe that some small percentage doesn't go to help publish it.

>  
>Even if printing and postage never went up, membership dues would. I would  
>imagine that membership dues covers a lot more than just the cost of QST.

Dues of \$39/ year, hmmm now that you mention it I am not excited about 1.62/ gallon for gas either but COLA is not going to come down in the near future either.

Benefits [me] I have had questions about VE program, training, instructors, etc. I have found the ARRL and various folks I have talked to like Rosalie, Ed, and Bart extremely helpful. If I am not sure who I should be asking a specific question I know I can send it to one of these folks and it will get routed quickly to the person that can provide the answers.

Do I agree with every decision they have made, nope!  
But I send a message to them to let them know and I get the courtesy of a response with a reason that in some cases points out I missed something in the bigger picture. Sometimes I still don't agree to.

Is there to much advertisement and not enough technical stuff in the magazine, I would like to see more technical things but can't really complain to much. When have I sent something in?? Haven't yet so is it completely their fault.....  
hmmmmmmmmmm But in this world today

they have expenses to make to keep the doors open, what is the easiest way to do that, sell advertising space!

Is the ARRL perfect, nope. But it is still a group that I am a member of and with all the hype and some problems with renewals I heard about, being charged for service from groups like W5YI. As a memeber you just fill out the form mail it to ARRL and in about 10 days your license is renewed! Can't beat that.....

I have recomended several friends to become a VE and I find it is a nice way to contribute to hobby. So in conclusion, while not perfect it is still like a big family and puts me in touch with many great folks!

73 oo

Chuck, AA8VS

FP #113 MI-QRP M1212 SOC #445 Firebird #2117

QTH 48187 [opps zipcode, got carried away]

"You see, wire telegraph is a kind of a very, very long cat. You pull his tail in New York and his head is meowing in Los Angeles. Do you understand this? And radio operates exactly the same way: you send signals here, they receive them there. The only difference is that there is no cat."

Albert Einstein (1879-1955)

<http://68.43.100.7:81/aa8vs>

---

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<http://photos.msn.com/support/worldwide.aspx>

-----

Date: Sat, 14 Sep 2002 02:46:15 +0000

From: "bill mill" <rvctuy19@hotmail.com>

To: qrp-l@lehigh.edu

Subject: [134991] fm receiver websites

Message-ID: <F174Nfv6Uy7oyK1fxWb00020814@hotmail.com>

Mime-Version: 1.0

Content-Type: text/plain; format=flowed

hi all,



due to a lot of responses i have decided to just list a site for you to get started with. this is an idea that is sure to get you thinking. hope you have a lot of fun building it.

kd5kac jnewburry

[www.vacuumtubesinc.com/info8.html](http://www.vacuumtubesinc.com/info8.html)

there are other low budget radios at this site

[http://www.somerset.net/arm/fm\\_only\\_lowtech.html](http://www.somerset.net/arm/fm_only_lowtech.html)

-----  
Send and receive Hotmail on your mobile device: <http://mobile.msn.com>

-----  
Date: Fri, 13 Sep 2002 22:52:19 -0400  
From: "N8IE" <n8ie@woh.rr.com>  
To: "QRP-1" <qrp-1@lehigh.edu>  
Subject: [134992] RE: QST Free? No, this is no free lunch  
Message-ID: <MMEDLKDLONJOAIGICDJAGEBIDEAA.n8ie@woh.rr.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

There you go making sense Chuck. This is QRP-1, be careful doing that.

72, oo

Dan, N8IE

FPqrp #-6, QRP-1 #1404, FISTS #4985

-----Original Message-----

From: owner-qrp-1@Lehigh.EDU [mailto:owner-qrp-1@Lehigh.EDU] On Behalf Of Charles Mabbott  
Sent: Friday, September 13, 2002 10:43 PM  
To: Low Power Amateur Radio Discussion  
Subject: RE: QST Free? No, this is no free lunch

>

>QST is free with membership. The AMA (Academy of Model Aeronautics) does  
>the

>same thing.

>You join and one of the perks is the "free" magazine, or you can buy it  
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Chuck, AA8VS  
FP #113 MI-QRP M1212 SOC #445 Firebird #2117  
QTH 48187 [opps zipcode, got carried away]

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Albert Einstein (1879-1955)

<http://68.43.100.7:81/aa8vs>

---

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<http://photos.msn.com/support/worldwide.aspx>

---  
Incoming mail is certified Virus Free.  
Checked by AVG anti-virus system (<http://www.grisoft.com>).  
Version: 6.0.385 / Virus Database: 217 - Release Date: 9/4/2002

---  
Outgoing mail is certified Virus Free.  
Checked by AVG anti-virus system (<http://www.grisoft.com>).  
Version: 6.0.385 / Virus Database: 217 - Release Date: 9/4/2002

---

Date: Fri, 13 Sep 2002 23:35:10 -0400  
From: Fred Lesnick <[flesnick@tbaytel.net](mailto:flesnick@tbaytel.net)>  
To: QRPL <[qrp-1@lehigh.edu](mailto:qrp-1@lehigh.edu)>, QRP Canada <[qrp-canada@neale.gpfn.sk.ca](mailto:qrp-canada@neale.gpfn.sk.ca)>, WUN <[wun@mailman.qth.net](mailto:wun@mailman.qth.net)>,  
Subject: [134993] 18.091, what mode?????  
Message-ID: <3D82AE6E.4702B234@tbaytel.net>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

It is 0332 Sept 14/02, and just tuning around the 17 meter band..  
But there is a strange signal on 18.091(USB).....it sounds like ALE,  
but it wont sync on the program, so it cant be that..  
Any ideas?

It is S-7 here in Thunder Bay.....  
Also hear it on 18.087.....

Fred

-----  
Date: Fri, 13 Sep 2002 18:45:34 -0500  
From: "Stuart Rohre" <rohre@arlut.utexas.edu>  
To: "Chuck Carpenter" <w5usj@9plus.net>, <qrp-1@lehigh.edu>  
Subject: [134994] 602 is the older chip, same specs for ham use as 612  
Message-ID: <005601c25b7f\$a7486930\$4e100a0a@rohredt2000>

No problem for ham use if you drop a 602 in for 612. Only 612's are currently produced. For ham use they are essentially the same. I think only the temp guaranteed specs range is the reason for two numbers.  
72, Stuart K5KVH

-----  
Date: Sat, 14 Sep 2002 04:14:06 +0100  
From: Chuck Adams <k7qo@earthlink.net>  
To: qrp-1@lehigh.edu  
Subject: [134995] SPICE models  
Message-ID: <5.1.0.14.0.20020914041319.009f5eb0@mail.earthlink.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

Gang,

An interesting exercise for those of you recommending PSPICE.

What is the model for the 1N34A or any Ge diode? :-)

dit dit

Chuck Adams, K7QO CP-60 k7qo@earthlink.net  
<http://www.qsl.net/k7qo>

Moving to Arizona? --- Bring your own water, please.

-----  
Date: Sat, 14 Sep 2002 00:26:01 -0400  
From: "Paul Mills" <quahog@localnet.com>  
To: <QRP-L@lehigh.edu>, <ve1vq@auracom.com>  
Subject: [134996] Re: QST on news stands  
Message-ID: <002901c25ba6\$d8207620\$d4519942@cybrinjn>  
MIME-Version: 1.0  
Content-Type: text/plain;  
          charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

----- Original Message -----

From: Dave Marling <ve1vq@auracom.com>  
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
Sent: Friday, September 13, 2002 7:24 PM  
Subject: Re: QST on news stands

> Paul, are there any radio places around MA/NH/ME besides the  
Salem, NH place?

>

> Dave

> VE1VQ

No more that I know of. Gone is the store in Somerville(?) and  
the Heathkit store on Route 9 in Framingham where I bought my  
long-gone HW-16.

Paul KB1GEJ

-----  
Date: Sat, 14 Sep 2002 05:19:22 +0100  
From: "Tony Fishpool" <tony@g4wif.fsnet.co.uk>  
To: "QRP-l" <qrp-l@lehigh.edu>  
Subject: [134997] Re: Ref. Datak VFO Kit  
Message-ID: <008501c25ba6\$37ca51a0\$a64386d9@celeron>  
MIME-Version: 1.0  
Content-Type: text/plain;  
          charset="Windows-1252"  
Content-Transfer-Encoding: 7bit

I wrote briefly about the LTC-1799 in QRPP a few issues back. It was a fun  
chip to play with and stability wasn't bad on the LF bands but not on 33MHz

as mentioned on the Datak webpage

(<http://www.philmore-datak.com/newpage23.htm>) - not by a long chalk.

Stability also has a lot to do with the quality and value of the pot used. At high frequency very little change in resistance causes huge frequency swings.

Just as I discovered the LTC-1799 and wanted to play with it my thoughts are now turning to digital pots and how we could use them to tune both things like this chip or even adjust varicap diodes for VFO/VXO use. I would love to see some discussion on the list from folk who have already had experience of using these. It seems that if we accounted for the characteristics of the varicap we could use them to step defined increments in frequency (say 10 Hz) and just have a pot for fine adjust. Fast tuning could then be simply an up/down button.

I would be interested to hear from the list's technical gurus what kind of filtering would be adequate for a square wave output of the LTC-1799 to simply inject into a crystal socket as suggested by the advert.

Doug KI6DS earlier mentioned "Test Equipment for the QRPer" - a collaborative book that Graham G3MFJ and I are launching in a few weeks time (available via Doug in the U.S.). There is an article in there about a simple signal generator using the LTC-1799 and here I got the thing fairly stable by using a series of switched fixed resistors and a 100 ohm pot to get coverage of a number of bands. I suspect that this is what Datek have done to "place this VFO on any band". I'm intrigued why they needed the "74H4049 for increased drive capability" as the output bangs off the supply rails (5v).

Incidentally, the LTC-1799 is an SOT-23 part which I'm now convinced stands for "Slides Off the Table. I got two to play with and one is on my shack floor somewhere - they are small!

Chuck WB9KZY mentioned "Surfboard prototyping circuit boards for SOT23-5 parts". In the book I've shown how you can make these for pennies.

Enough of the shameless plugs - back to our normal programming. We haven't done making Q-dope for a while :-)

Kind regards

Tony - G4WIF

-----

Date: Sat, 14 Sep 2002 00:18:18 -0400  
From: "Mark J. Dulcey" <mark@buttery.org>  
To: jacksonharbor@att.net  
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [134998] Re: Ref. Datak VFO Kit  
Message-ID: <3D82B88A.3080701@buttery.org>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii; format=flowed  
Content-Transfer-Encoding: 7bit

jacksonharbor@att.net wrote:

> Gang -  
>  
> I also saw the item in World Radio - the kit sounds pretty neat, especially  
> since the surface mount part is already soldered.  
>  
> A few thoughts:  
>  
> 1) The Linear Technology LTC-1799  
>  
> (<<http://www.linear-tech.com/pdf/1799f.pdf>> for the data sheet)  
>  
> used in the Datak VFO is a square wave output device, a 5 lead surface mount  
> part - maybe the Datak VFO has some kind of output filtering ?

Not needed in many applications. Square waves are the preferred input for any type of switching mixer, which include both passive diode DBMs and the new generation of mixers using analog switch ICs.

-----

Date: Fri, 13 Sep 2002 21:43:23 -0700  
From: "Tracy Markham" <tracy@bytemark.com>  
To: "QRP-L" <qrp-l@lehigh.edu>, <tony@g4wif.fsnet.co.uk>  
Subject: [134999] RE: Ref. Datak VFO Kit  
Message-ID: <GNEOLGDJDOPEALHJMKLCEEGICLAA.tracy@bytemark.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
          charset="Windows-1252"  
Content-Transfer-Encoding: 7bit

I've used the Xicor digital pots, they are simple and work great. I made an 8255a controller that I've used to experiment with digital stuff, and they worked great with that.

Software, VB or VC, is easy to write. Neat chips.

See -

<http://www.xicor.com/folders/x9118t.php>

I don't know about noise, but they've worked in the IF amp by Hayward in the Progressive Receiver and I didn't hear any difference. (no measurements or test equipment ...)

Tracy N4LGH.

Just as I discovered the LTC-1799 and wanted to play with it my thoughts are now turning to digital pots and how we could use them to tune both things like this chip or even adjust varicap diodes for VFO/VXO use. I would love to see some discussion on the list from folk who have already had experience of using these. It seems that if we accounted for the characteristics of the varicap we could use them to step defined increments in frequency (say 10 Hz) and just have a pot for fine adjust. Fast tuning could then be simply an up/down button.

-----  
Date: Sat, 14 Sep 2002 00:53:07 -0400  
From: "Mark J. Dulcey" <mark@buttery.org>  
To: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>  
Subject: [135000] Re: QST on news stands  
Message-ID: <3D82C0B3.1040504@buttery.org>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii; format=flowed  
Content-Transfer-Encoding: 7bit

Paul Mills wrote:

>  
>>Paul, are there any radio places around MA/NH/ME besides the  
>  
> Salem, NH place?  
>  
>>Dave  
>>VE1VQ  
>  
>  
> No more that I know of. Gone is the store in Somerville(?) and  
> the Heathkit store on Route 9 in Framingham where I bought my  
> long-gone HW-16.

You're probably thinking of Tufts Radio, which was in Medford, not Somerville.  
Long gone.



Other places that are gone: Tel-Com in Westford, and Rivendell Electronics in Derry NH. The Heathkit store, of course, died along with the company.

HRO in Salem NH is really it these days, unless you count the small amount of ham gear available at Radio Shack. There are some places where you can get parts of interest to hams, such as coax, connectors, etc. - such as You-Do-It Electronics in Needham - but no place else to buy rigs.

A bit farther from here is Lentini Communications in Newington CT, not far from ARRL HQ. But that's not one of the states you asked about.

-----  
Date: Sat, 14 Sep 2002 10:27:11 +0000  
From: "Leon Heller" <leon\_heller@hotmail.com>  
To: Dan.Tayloe@motorola.com, qrp-1@lehigh.edu  
Subject: [135001] Re: VFOs and magnetic fields  
Message-ID: <F2242DCKE24sLueLWtV0000caef@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

>From: Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>  
>Reply-To: Dan.Tayloe@motorola.com  
>To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>  
>Subject: VFOs and magnetic fields  
>Date: Fri, 13 Sep 2002 19:15:06 -0700  
>  
> >\*\*\*\*adjacent placement to a highly ferrous metal  
> >  
> >ANY metal will cause the problem, nothing especial with ferrous metal.  
> >The capacitor pf rise getting close to any conductor, fixing it tight to  
> >any surface  
> >metal or not may fix the problem. (not to a hot spot).  
>  
>It is not true that "any metal" will cause problems with your VFO. The  
>real problem is that  
>the VFO produces both an electric field and a magnetic field and that the  
>aluminum is  
>transparent to the magnetic field, allowing the VFO to interact with  
>objects outside the chassis  
>that will react to magnetic energy. Steel objects would be a problem,

>aluminum objects  
>are not.  
>  
>I have begun to appreciate that an aluminum enclosure seals out electrical  
>fields (direct RF  
>radiation), but not magnetic fields

I've seen one or two designs that use an (empty) tin can to house a VF0. I think KK7B did this with one of his Rxs. The steel should help screen the H field. I don't think he used it for this purpose, though, it was probably just convenient.

How about mu-metal? It should still be available, and gives virtually 100% magnetic screening. I've heard of entire rooms being screened with the stuff for SQUID (quantum magnetic detection devices) experiments measuring magnetic fields in subjects' brains.

73, Leon

--

Leon Heller, G1HSM Tel: +44 1424 14790

Email:leon\_heller@hotmail.com

My web page: [http://www.geocities.com/leon\\_heller](http://www.geocities.com/leon_heller)

My low-cost Altera Flex design kit: <http://www.leonheller.com>

---

Send and receive Hotmail on your mobile device: <http://mobile.msn.com>

-----  
Date: Sat, 14 Sep 2002 10:32:39 +0000  
From: "Leon Heller" <leon\_heller@hotmail.com>  
To: k7qo@earthlink.net, qrp-1@lehigh.edu  
Subject: [135002] Re: SPICE models  
Message-ID: <F816ZUbPHiNKyKJWjew00001d23@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

>From: Chuck Adams <k7qo@earthlink.net>  
>Reply-To: k7qo@earthlink.net  
>To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>  
>Subject: SPICE models  
>Date: Sat, 14 Sep 2002 04:14:06 +0100  
>

>  
>  
>Gang,  
>  
>An interesting exercise for those of you recommending PSPICE.  
>  
>What is the model for the 1N34A or any Ge diode? :-)

I was modelling an RF probe recently, just out of curiosity, and looked for this, without any success. I ended up using a Schottky diode. It was flat up to well over 1 GHz, although stray inductance and capacitance would reduce that in practice.

73, Leon

--

Leon Heller, G1HSM Tel: +44 1424 14790

Email:leon\_heller@hotmail.com

My web page: [http://www.geocities.com/leon\\_heller](http://www.geocities.com/leon_heller)

My low-cost Altera Flex design kit: <http://www.leonheller.com>

---

Chat with friends online, try MSN Messenger: <http://messenger.msn.com>

-----  
Date: Sat, 14 Sep 2002 05:05:39 -0600 (MDT)  
From: "Karl F. Larsen" <k5di@zianet.com>  
To: Fred Lesnick <flesnick@tbaytel.net>  
Cc: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>  
Subject: [135003] Re: 18.091, what mode?????  
Message-ID: <Pine.LNX.4.44.0209140504050.2041-100000@bucket.dog>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi Fred, I think your listening to Pactor on the wrong sideband. 17 meters is a real good band for stations a long way away.

On Fri, 13 Sep 2002, Fred Lesnick wrote:

> It is 0332 Sept 14/02, and just tuning around the 17 meter band..  
> But there is a strange signal on 18.091(USB).....it sounds like ALE,  
> but it wont sync on the program, so it cant be that..  
> Any ideas?  
> It is S-7 here in Thunder Bay.....  
> Also hear it on 18.087.....

>  
> Fred  
>

--  
72, Karl K5DI

```
  _  _  _  _  _  _  _  _  _  _  _  _  _  _  _  _  _  _  _  _  _  _  
 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
```

-----  
Date: Sat, 14 Sep 2002 05:21:26 -0600 (MDT)  
From: "Karl F. Larsen" <k5di@zianet.com>  
To: Jay Henson <aj4ay@worldnet.att.net>  
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [135004] Re: QRP Afield -- 21 September 02  
Message-ID: <Pine.LNX.4.44.0209140513260.2041-1000000@bucket.dog>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

I don't see the problem. If 2 guys want to work together on this contest they can. They use their own calls and submit their own scores but can have bragging rights if they beat their friends score.

I have done this with guys and it works out fine. However, if you want to win make sure you "volunteer" to take 20 meters. Most of the QRP contests I have been on were joined with bad space weather, and numbers like 234 67 4.

K5DI Tim always gets 20 meters because his K2 works "best" on that band.

On Fri, 13 Sep 2002, Jay Henson wrote:

> All,  
>  
> Doug, KI6DS said,  
> > Chuck, I implore you to reconsider the rule that does not allow multiple  
> > stations to be set up at the same location using different call signs. I

--  
72, Karl K5DI

- -- - - - - - - - -

| | | \_ \_ || \ | | | | | \ \ /  
| | \_ | | | . ' | | | \_ | | > <  
| \_ \_ | \_ | | \_ \ \ \ \_ \_ \_ / / \_ \ \

-----  
Date: Sat, 14 Sep 2002 07:16:18 -0400  
From: Harry Hurst <wa3ptg@comcast.net>  
To: ki6ds@dph.dpol.net,  
    "'Low Power Amateur Radio Discussion'" <qrp-1@lehigh.edu>  
Subject: [135005] RE: Who does have the most stable vfo design?  
Message-ID: <000001c25be0\$26746780\$0500a8c0@matthew>  
MIME-version: 1.0  
Content-type: text/plain; charset=iso-8859-1  
Content-transfer-encoding: 7BIT

How to build a stable VFOs consistently is a mystery to me. I have a HB 40 meter superhet with a VFO that has crystal-control like stability. Then there is the 20 meter receiver -- 6 MHz. VFO -- that drifts all over. Both are similar to W1FB's Notebook projects, JFET hartlys.

I'd welcome a general discussion of VFO construction, and a discussion of kit VFOs. It would be interesting to see what affects stability. What voltage do the kit VFOs use? What frequency? What type of oscillator and oscillator transistor?

Another question is: What's the best cheap-computer-crystal IF for each band?

Great idea, Doug.

Hap, WA3PTG  
Wilmington DE

-----Original Message-----  
From: owner-qrp-1@Lehigh.EDU [mailto:owner-qrp-1@Lehigh.EDU]On Behalf Of Doug Hendricks  
Sent: Friday, September 13, 2002 9:49 PM  
To: Low Power Amateur Radio Discussion  
Subject: Who does have the most stable vfo design?

-----  
Date: Sat, 14 Sep 2002 11:09:38 +0100  
From: JOSE VICENTE <vicente@supernet.com.br>  
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [135006] Re: VFOs and magnetic fields  
Message-ID: <5.1.0.14.2.20020914110545.00a864e0@localhost>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 07:15 PM 9/13/02 -0700, you wrote:

> >\*\*\*\*\*adjacent placement to a highly ferrous metal  
> >  
> >ANY metal will cause the problem, nothing especial with ferrous metal.  
> >The capacitor pf rise getting close to any conductor, fixing it tight to  
> >any surface  
> >metal or not may fix the problem. (not to a hot spot).  
>  
>It is not true that "any metal" will cause problems with your VFO. The  
>real problem is that  
>the VFO produces both an electric field and a magnetic field and that the  
>aluminum is  
>transparent to the magnetic field, allowing the VFO to interact with  
>objects outside the chassis  
>that will react to magnetic energy. Steel objects would be a problem,  
>aluminum objects  
>are not.  
>  
>I have begun to appreciate that an aluminum enclosure seals out electrical  
>fields (direct RF  
>radiation), but not magnetic fields. I found this out as I tried to use  
>passive LC filters in  
>a DC receiver. In an aluminum chassis, the ferrite "shielded" inductors  
>would pick up  
>transformer 60 Hz, and all sorts of noise from a TV on the other side of  
>the wall. Some of  
>my initial designs used stout active low pass filters to get rid of the  
>60/120 Hz hum I  
>would get.  
>  
>With receivers sensitive to 0.1 uV, it does not take much of a magnetic  
>field to get picked  
>up as an annoying audio signal.  
>  
>Applying this to a VFO, that section would be sensitive to anything that

>would react to the  
>magnetic field that the VFO is generating. You can test this with a piece  
>of aluminum and  
>your Norcal Paddle base (steel).  
>  
>If you really want to check the sensitivity to magnetic fields, just try  
>bringing a magnet near  
>your rig and see what that does to your VFO.  
>  
>Even better.... If you have one of those old tape demagnetizer wands,  
>turn it on and bring  
>that near your rig!  
>  
>- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

Hum transfer by magnetic field do nothing if the coils are toroidal.  
Open field coils works like a transformer secondary, the noise will  
be worst the close it is from the source. Steel plates help the shielding  
for hum, the right shield material name is mu metal.

If you really want to check the sensitivity to magnetic fields, just try  
bringing a magnet near  
your rig and see what that does to your VFO.  
Will do nothing if the coil uses a toroidal core.

73, Joe py2auc (since 1948)

-----  
Date: Sat, 14 Sep 2002 07:32:02 -0400  
From: Harry Hurst <wa3ptg@comcast.net>  
To: "'Low Power Amateur Radio Discussion'" <qrp-1@lehigh.edu>  
Subject: [135007] TS-520 question  
Message-ID: <000101c25be2\$58f8c4b0\$0500a8c0@matthew>  
MIME-version: 1.0  
Content-type: text/plain; charset=iso-8859-1  
Content-transfer-encoding: 7BIT

I picked up an old TS-520 at a hamfest this summer. (What was I thinking?)  
Later, I located a CW filter, and installed it -- well soldered it in  
place. The problem is, I don't have ANY info about this radio, and working  
on Riceboxes is outside my experience. I need to move a wire to enable the

CW filter. Can someone tell me which one?

I can build a working radio from scratch, but with this rig, I'm lost.  
Shudda stuck to homebrew.

TIA & 72

Hap, WA3PTG  
Wilmington DE

-----  
Date: Sat, 14 Sep 2002 07:39:08 -0400  
From: John R Kirby <n3aaz-qrp@juno.com>  
To: qrp-l@lehigh.edu  
Subject: [135008] DATAK VFO  
Message-ID: <20020914.073920.-261963.0.n3aaz-qrp@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain  
Content-Transfer-Encoding: 7bit

For . . .  
more info on the VFO 80-1410 and  
list of over 100 other kits and  
PCB Instructions and  
list of distributors.

<http://www.philmore-datak.com/newpage23.htm>

John  
N3AAZ  
FM 19 xa

-----  
GET INTERNET ACCESS FROM JUNO!  
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<http://dl.www.juno.com/get/web/>.

-----  
Date: Sat, 14 Sep 2002 05:40:57 -0600 (MDT)  
From: "Karl F. Larsen" <k5di@zianet.com>  
To: Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>



Cc: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>  
Subject: [135009] Re: VFOs and magnetic fields  
Message-ID: <Pine.LNX.4.44.0209140531490.2041-100000@bucket.dog>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi guys, I recall the old Mu metal crt covers that were made to try and keep stray magnetic field away from the CRT tube. The problem of course was that a magnetic field is used to deflect the electron beam as desired and alas, any stray magnetic field would deflect it too. They were quite expensive and didn't work real well.

As I recall the first VFO I built around 1950 was in a steel chassis box shock mounted on a larger steel chassis. I think it had one 6SK7 tube and an 0B2 regulator. Worked fine.

On Fri, 13 Sep 2002, Tayloe Dan-P26412 wrote:

> >\*\*\*\*adjacent placement to a highly ferrous metal  
> >  
> >ANY metal will cause the problem, nothing especial with ferrous metal.  
>  
> It is not true that "any metal" will cause problems with your VFO. The real problem is that  
> the VFO produces both an electric field and a magnetic field and that the aluminum is

--

- Karl Larsen k5di Las Cruces,NM Az ScQRPions -

-----  
Date: Sat, 14 Sep 2002 05:40:49 -0600  
From: "Rod N0RC" <rod@n0rc.us>  
To: <rohre@arlut.utexas.edu>,  
"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [135010] Re: 602 is the older chip, same specs for ham use as 612  
Message-ID: <005201c25be3\$932dc7b0\$6401a8c0@greyrock>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="Windows-1252"  
Content-Transfer-Encoding: 7bit

Stuart,

----- Original Message -----

From: "Stuart Rohre" <rohre@arlut.utexas.edu>

To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>

Sent: Friday, September 13, 2002 5:45 PM

Subject: 602 is the older chip, same specs for ham use as 612

> No problem for ham use if you drop a 602 in for 612.

Agreed.

> Only 612's are currently produced.

Not true Philips still make both. From:

<http://www.semiconductors.philips.com/pip/SA602AD>

the status of the SA602 shows "FULL PRODUCTION"

> I think

> only the temp guaranteed specs range is the reason for two numbers.

>From the Philips data sheets temp specs are the same for both chips. The 602 has more tightly controlled operational specs. But the differences between 602 and 612 are quite small. Starting with this page:

<http://www.semiconductors.philips.com/catalog/219/282/31114/31466/index.html#31466>

you can pull the datasheet for both devices.

> 72, Stuart K5KVH

>

73, Rod N0RC

-----  
Date: Sat, 14 Sep 2002 07:50:44 -0400

From: "John Dorson" <jdorson@worldshare.net>

To: <w6toy@erols.com>,

"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>

Subject: [135011] Re: Why?

Message-ID: <00d001c25be4\$f987e8a0\$829b8b41@atwork>

MIME-Version: 1.0

Content-Type: text/plain;

charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Bruce after reading many, many of your e-mail correspondence I think I know your problem.

First you are NOT the smartest person in the world as you try to project. In fact I have yet to meet the smartest person in the world.

Second you seem to have a real problem in understanding the fact that yours is not the ONLY opinion on any subject.

Once these are over come I think you will feel better about many things.

John K2JHU...

----- Original Message -----

From: "Bruce Muscolino" <w6toy@erols.com>

To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>

Sent: Friday, September 13, 2002 4:33 PM

Subject: Why?

>  
> Why ooh why is there so much anti ARRL membership sentiment on this  
> list? I find this really curious. Maybe it is an age related failure.  
>  
> Way back when the earth was very young, a small Ohio farm boy got  
> interested in this new fangled thing called radio. Radios were made  
> from rocks back then (Leon Hellen, take note!).  
>  
> He wanted to be a ham, because he had heard some hams on 40 metes  
> phone! He knew that was for him! He didn't have a local club to help  
> him, and he most certainly didn't have a computer to depend on! He had  
> the ARRL, and their publications and services to help him.  
>  
> He persisted in his quest. Using the League's books, and copying their  
> W1AW code practice sessions, he eventually passed his novice license.  
> He did it by himself, except for the elmer who gave him the test!  
>  
> This led to a life in electronics. A career as varied and interesting  
> as any, and more that most. He has guided torpedoes, navigated by  
> satellite, flown auto land aircraft, lived in Europe and also in Asia.  
> There is very little more that he could have asked for, and most of it  
> could be traced to the League!  
>  
> In about 1975 he bought a life membership, because he didn't want to  
> chance missing an issue of QST. For the life of me, I cannot understand  
> why people get so up in arms over a \$39.00 membership fee, especially

> considering all it can get for you!  
>  
> 73

-----  
Date: Sat, 14 Sep 2002 08:17:37 EDT  
From: IamSF5@aol.com  
To: k5di@zianet.com, qrp-1@lehigh.edu  
Subject: [135012] Re: Where is everyone?  
Message-ID: <d2.1de16f54.2ab482e1@aol.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="US-ASCII"  
Content-Transfer-Encoding: 7bit

In a message dated 9/13/02 9:38:49 PM Eastern Daylight Time, k5di@zianet.com writes:

<<  
After dinner I tuned to the beacons on 10 meters and the band is ALIVE! I got on with my FT-817 and called CQ 5 times and not one call. It's another case of open band, no operators. What's new?  
>>  
It was FRIDAY the 13 and everyone went to Jason's house.  
Bob  
AF2Q

-----  
Date: Sat, 14 Sep 2002 07:23:11 -0500  
From: "Brian" <brian@iquest.net>  
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [135013] Re: Who does have the most stable vfo design?  
Message-ID: <004801c25be9\$7e748bf0\$28612bd1@bmurrey2K>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Hap,

I don't know what I am talking about when it comes to VFO design, but somewhere in the dark recesses of my mind I seem to remember reading something about VFO circuitry at lower freqs is easier to keep stable than VFO circuitry at higher freqs. This might explain some of what you are seeing.

It is early Saturday morning and I have had zero coffee yet so that may or may not make sense.

73

```
=====
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
=====
```

----- Original Message -----

From: "Harry Hurst" <wa3ptg@comcast.net>  
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
Sent: Saturday, September 14, 2002 6:16 AM  
Subject: RE: Who does have the most stable vfo design?

> How to build a stable VF0s consistenly is a mystery to me. I have a  
HB 40  
> meter superhet with a VF0 that has crystal-control like stability.  
Then  
> there is the 20 meter receiver -- 6 MHz. VF0 -- that drifts all  
over. Both  
> are similar to W1FB's Notebook projects, JFET hartlys.  
>  
> I'd welcome a general discussion of VF0 construction, and a  
discussion of  
> kit VF0s. It would be interesting to see what affects stability.  
What  
> voltage do the kit VF0s use? What frequency? What type of  
oscillator and  
> oscillator transistor?  
>  
> Another question is: What's the best cheap-computer-crystal IF for  
each  
> band?  
>  
> Great idea, Doug.  
>  
>  
>  
> Hap, WA3PTG  
> Wilmington DE

>  
>  
>  
>  
>  
> -----Original Message-----  
> From: owner-qrp-1@Lehigh.EDU [mailto:owner-qrp-1@Lehigh.EDU]On  
Behalf Of  
> Doug Hendricks  
> Sent: Friday, September 13, 2002 9:49 PM  
> To: Low Power Amateur Radio Discussion  
> Subject: Who does have the most stable vfo design?  
>  
>  
>  
>

-----  
Date: Sat, 14 Sep 2002 08:42:05 -0400  
From: W2AGN <w2agn@w2agn.net>  
To: k5di@zianet.com,  
    Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>  
Subject: [135014] Re: QRP Afield -- 21 September 02  
Message-ID: <3D82F65D.31891.371149B6@localhost>  
MIME-version: 1.0  
Content-type: text/plain; charset=US-ASCII  
Content-transfer-encoding: 7BIT  
Content-description: Mail message body

On 14 Sep 2002 at 5:21, Karl F. Larsen wrote:

>  
> I don't see the problem. If 2 guys want to work together on this contest  
> they can. They use their own calls and submit their own scores but can  
> have bragging rights if they beat their friends score.

Try READING Karl! The "problem" is that exactly what you are suggesting IS NOT  
PERMITTED by the rules. DUH!

> On Fri, 13 Sep 2002, Jay Henson wrote:  
>  
> > All,  
> >  
> > Doug, KI6DS said,

> > > Chuck, I implore you to reconsider the rule that does not allow multiple  
> > > stations to be set up at the same location using different call signs. I  
>

--

/\ /\ /\ /\ /\ John L. Sielke  
( W )( 2 )( A )( G )( N ) <http://www.w2agn.net>  
\\_/\_ \\_/\_ \\_/\_ \\_/\_ QRP/ARCI, NJQRP, ARQrp, GQRP, RSGB  
Ex- K3HLU, W7JEF, W4MPC, N4JS

-----  
Date: Sat, 14 Sep 2002 08:48:59 -0400  
From: wkhibbert@juno.com  
To: qrp-1@lehigh.edu  
Subject: [135015] My One & Only ARRL Post  
Message-ID: <20020914.084859.-276487.0.wkhibbert@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

This is it...

If the ARRL ticks me off enough, I won't renew my life membership.

73, Wm. Keith Hibbert, WB2VUO, TC/WNY ARRL Section  
President, Brockport Amateur Radio Klub  
"My night light runs more power than my Rig!!!"

-----  
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<http://dl.www.juno.com/get/web/>.

-----  
Date: Sat, 14 Sep 2002 08:17:46 -0700  
From: "Dave Benson" <nn1g@earthlink.net>  
To: <jacksonharbor@att.net>,  
"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [135016] Re: Ref. Datak VFO Kit  
Message-ID: <000301c25c06\$ff51b820\$c752d03f@pavilion>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Chuck Olson writes:

>>

A few thoughts:

1) The Linear Technology LTC-1799

(<http://www.linear-tech.com/pdf/1799f.pdf> for the data sheet)

used in the Datak VFO is a square wave output device, a 5 lead surface mount part - maybe the Datak VFO has some kind of output filtering ?

<<

If it's a square-wave output device and frequency is set by a resistor, then it's an R-C oscillator. 'Phase noise' will be considerable. While this may not be concern at QRP transmitter levels, when used as the local oscillator in a receiver you may well find the background noise to be considerably higher. The 'programmable crystal oscillators' recently available suffer from the same syndrome- they use a divided-down crystal reference and phase-lock an R-C oscillator to it. I could clearly see the noise profile on my spectrum analyser. Not communications quality!

'LF to 30+ Mhz, clean and stable' is a tall order for a simple circuit. 'No free lunch' applies here.

73- Dave, K1SWL

-----  
Date: Sat, 14 Sep 2002 09:03:45 -0400  
From: David Hinerman <WD8CIV@worldnet.att.net>  
To: qrp-1@lehigh.edu  
Subject: [135017] Re: VFOs and magnetic fields  
Message-ID: <5.1.0.14.1.20020914090017.00b1f4c0@postoffice.worldnet.att.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed



>How about mu-metal? It should still be available, and gives virtually 100%  
>magnetic screening. I've heard of entire rooms being screened with the  
>stuff for SQUID (quantum magnetic detection devices) experiments measuring  
>magnetic fields in subjects' brains.

Leon,

We still use mu-metal at work to shield transformers used in measuring power. We've had products in the past that we'd assemble & calibrate, then swap the leads on the power supply transformer primary and have the calibration go screwy. A mu-metal shroud around the power transformer usually does the trick.

I'm not sure where one gets small quantities of the stuff, but I'll try to find out from our Purchasing department where we get it if anyone's interested.

Dave

-----  
"You can fool some of the people all of the time. That's enough to make a living." - Lance Burton  
-----

Dave Hinerman  
WD8CIV@att.net

-----  
Date: Sat, 14 Sep 2002 09:06:00 -0400  
From: "carl seyresdahl" <carlseye@tampabay.rr.com>  
To: <brian@iquest.net>,  
    "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [135018] Re: Who does have the most stable vfo design?  
Message-ID: <009401c25bef\$792b7e00\$d2af2341@tampabay.rr.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
    charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Don't forget Dave Benson's WM-20 ssb rig. I have one (for several years now) and it seems to be exceptionally stable !!! Usual disclaimers!!!

carl / kz5ca

----- Original Message -----

From: "Brian" <brian@iquest.net>  
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
Sent: Saturday, September 14, 2002 8:23 AM  
Subject: Re: Who does have the most stable vfo design?

> Hap,  
>  
> I don't know what I am talking about when it comes to VFO design, but  
> somewhere in the dark recesses of my mind I seem to remember reading  
> something about VFO circuitry at lower freqs is easier to keep stable  
> than VFO circuitry at higher freqs. This might explain some of what  
> you are seeing.  
>  
> It is early Saturday morning and I have had zero coffee yet so that  
> may or may not make sense.  
>  
> 73  
>  
>  
> =====  
> KB9BVN/QRP - New Whiteland IN - EM69WN  
> QRP-ARCI #10223 QRP-L #1540 FIST #5695  
> FISTS CC #764 - Proud Member ARRL  
> HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W  
> INTO INFAMOUS AF4PS ATTIC DIPOLE  
> SOC #400 AND FLYING PIGS QRP #-57  
> =====  
>  
> ----- Original Message -----  
> From: "Harry Hurst" <wa3ptg@comcast.net>  
> To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
> Sent: Saturday, September 14, 2002 6:16 AM  
> Subject: RE: Who does have the most stable vfo design?  
>  
>  
> > How to build a stable VFOs consistently is a mystery to me. I have a  
> HB 40  
> > meter superhet with a VFO that has crystal-control like stability.  
> Then  
> > there is the 20 meter receiver -- 6 MHz. VFO -- that drifts all  
> over. Both  
> > are similar to W1FB's Notebook projects, JFET hartlys.  
> >  
> > I'd welcome a general discussion of VFO construction, and a  
> discussion of  
> > kit VFOs. It would be interesting to see what affects stability.  
> What  
> > voltage do the kit VFOs use? What frequency? What type of  
> oscillator and  
> > oscillator transistor?  
> >

> > Another question is: What's the best cheap-computer-crystal IF for  
> each  
> > band?  
> >  
> > Great idea, Doug.  
> >  
> >  
> >  
> > Hap, WA3PTG  
> > Wilmington DE  
> >  
> >  
> >  
> > -----Original Message-----  
> > From: owner-qrp-1@Lehigh.EDU [mailto:owner-qrp-1@Lehigh.EDU]On  
> Behalf Of  
> > Doug Hendricks  
> > Sent: Friday, September 13, 2002 9:49 PM  
> > To: Low Power Amateur Radio Discussion  
> > Subject: Who does have the most stable vfo design?  
> >  
> >  
> >  
> >  
>  
>

-----  
Date: Sat, 14 Sep 2002 09:26:26 -0400  
From: "E. Roswell" <eroswell@monmouth.com>  
To: qrp-1@lehigh.edu  
Subject: [135019] Re: DATAK VFO  
Message-ID: <3D833902.7804A94E@monmouth.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

So which of their distributors carries them? I spent a half hour going through their list, and couldn't find one who listed either the VFO or any of their products on a web site. So before I send out dozens of e-Mails, or make dozens of phone calls, has anyone ordered the VFO from one of the distributors?

- 73, Ed, K2MGM.

-----  
Date: Sat, 14 Sep 2002 09:22:11 -0400  
From: wb4mnf <wb4mnf@atl.org>  
To: Doug.Davies@gems3.gov.bc.ca  
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [135020] Re: next generation qrp equipment development  
Message-ID: <3D833803.8070402@atl.org>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii; format=flowed  
Content-Transfer-Encoding: 7bit

What's that magical stuff? It travels through space carrying information. Isn't it radio? The 'box' is just an interface.

Bob, AH7I (ex wb4mnf)

Davies, Doug A FOR:EX wrote:

> In the future , we will be known as "amateur computer operators" not  
> "amateur radio operators" because soon there will be no more "radio" in it.  
>  
> Doug VA7DD  
>  
>  
>

-----  
Date: Sat, 14 Sep 2002 09:30:26 -0400  
From: "Ken Newman" <n2cq@dandy.net>  
To: "W3BG" <W3BG@arrl.net>, "EPA-QRP Club" <EPA-QRP@yahoogroups.com>,  
"NJ-QRP Club" <NJQRP@njqrp.org>,  
Subject: [135021] [CONTEST] NJQRP Homebrewer Sprint Announcement  
Message-ID: <001301c25bf2\$e442ee00\$309ffa42@18.95.182.twsn1.md.home.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Please mark your QRP operating calendar for the

\*\*\*NJQRP Homebrewer Sprint\*\*\*

FALL --> Sept 23, 2002 0000-0400 UTC  
(Sunday evening in the US)

Put down the soldering iron and get on the air with other QRP homebrewers!  
The NJQRP and "QRP Homebrewer" magazine are sponsoring this fun, quick and  
easy QRP sprint ... with a homebrew twist! Includes PSK31 mode and  
multipliers for home-built gear. Prizes for the winner(s) and special  
certificates for all.

Mission: Promote homebrewed & homemade equipment on the air together.  
(Warblers too!) Anyone with ANY equipment can  
enter.

Sponsor: New Jersey QRP Club ( <http://www.njqrp.org> )

When: The fourth Monday in March and September 0000-0400 UTC (Sunday  
evening in USA/Canada)

Modes: CW and PSK31. (Both modes considered separate bands)  
QRP CW and PSK31 frequencies recommended on 80, 40,  
20, 15 and 10 meters.

Exchange: RST - State/Province/Country - Power out

QSO Points:

- 2 Commercial Equipment
- 3 Homebrew Xmtr or Rcvr
- 4 Homebrew Xmtr AND Rcvr or Xcvr
- 5 Homebrew PSK31 station

(Kits are ok for homebrew)

Power Mult:  $0 > 250 \text{ mW} = \times 15$ ,  $250 \text{ mW} > 1 \text{ W} = \times 10$ ,  $1 - 5 \text{ W} = \times 7$ ,  $> 5 \text{ W} = \times 1$ .  
(The highest power used during the contest for  
the mult.)

Multiplier: State/Province/Country for all bands. The same station  
may be worked on more than one band for QSO points  
and  
SPC credit. CW and PSK31 are considered separate  
bands.

SCORE: Points(total for all bands)  
x SPC (total for all bands)  
x power multiplier.

AWARDS: Awards of current NJQRP Club kits or subscriptions to  
"QRP Homebrewer" will be provided based on the number  
of entries received. Special certificates will also be

awarded.

LOGS: Entries must be received by 30 days from the contest. The  
log sheets and summary should be included. E-mail logs  
are  
accepted in text form. (No word processor files etc).  
Also paper logs are ok.

Please include your Soapbox info with your equipment  
and  
exploits.

Send logs to:

Ken Newman, N2CQ  
81 Holly Drive  
Woodbury, NJ 08096

or send by email to n2cq@arrl.net

Rules at: <http://www.njqrp.org/data/qrp-homebrewersprint.html>

-----  
Date: Sat, 14 Sep 2002 13:54:24 +0000  
From: "Leon Heller" <leon\_heller@hotmail.com>  
To: wa3ptg@comcast.net, qrp-l@lehigh.edu  
Subject: [135022] RE: Who does have the most stable vfo design?  
Message-ID: <F11gAL5PulZIHKcoTp5000048b2@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

>From: Harry Hurst <wa3ptg@comcast.net>  
>Reply-To: wa3ptg@comcast.net  
>To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
>Subject: RE: Who does have the most stable vfo design?  
>Date: Sat, 14 Sep 2002 07:16:18 -0400  
>  
>How to build a stable VFOs consistently is a mystery to me. I have a HB 40  
>meter superhet with a VFO that has crystal-control like stability. Then  
>there is the 20 meter receiver -- 6 MHz. VFO -- that drifts all over. Both  
>are similar to W1FB's Notebook projects, JFET hartlys.  
>

>I'd welcome a general discussion of VFO construction, and a discussion of  
>kit VFOs. It would be interesting to see what affects stability. What  
>voltage do the kit VFOs use? What frequency? What type of oscillator and  
>oscillator transistor?

Apart from stability, there are also spectral purity, phase noise, tuning  
range, cost and power consumption. Some of these requirements are mutually  
exclusive. 8-(

73, Leon

--

Leon Heller, G1HSM Tel: +44 1424 14790

Email:leon\_heller@hotmail.com

My web page: [http://www.geocities.com/leon\\_heller](http://www.geocities.com/leon_heller)

My low-cost Altera Flex design kit: <http://www.leonheller.com>

---

Join the world s largest e-mail service with MSN Hotmail.  
<http://www.hotmail.com>

---

Date: Sat, 14 Sep 2002 10:21:42 -0400  
From: "Vincent A. Santis" <vsantis@earthlink.net>  
To: "QRP List (E-mail)" <qrp-l@lehigh.edu>,  
"Tentec (E-mail)" <tentec@contesting.com>  
Cc: "Tentec (E-mail)" <tentec@contesting.com>  
Subject: [135023] Resistor needed  
Message-ID: <01C25BD8.9AFC8860.vsan@earthlink.net>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Content-Transfer-Encoding: 7bit

Good morning,

I visited my friendly, local RadioShack this morning looking for a 390 ohm  
resistor. To my disappointment they no longer carry that value. Can someone  
out there provide me with one? I'll gladly send an SASE and pay for the  
resistor.

Thanks,

ince Santis,N1VS  
Winsted, CT  
NEQRP # 598  
PRP-L # 2372

FISTS# 8053  
CC # 1161  
K1 #841

-----  
Date: Sat, 14 Sep 2002 10:32:54 -0400  
From: "Paul Mills" <quahog@localnet.com>  
To: <QRP-L@lehigh.edu>, <wa3ptg@comcast.net>  
Subject: [135024] Re: TS-520 question  
Message-ID: <000b01c25bfc\$3db73be0\$20439942@cybrinjn>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Hap,

Good buy...

There are two wires soldered to a pin labeled 'ssb' next to the sideband filter. The upper one, brown I think, needs to be moved to the bare pin labeled 'cw' next to the slot for the cw filter. Some guys have modified the fixed channel switch to allow wide/narrow cw operation. Do a google/whatever search on ts-520 and you will find mods. There are copies of the manual available from a couple of sources, good idea to get one. Given the age of the radio, it may need alignment for good performance.

The rig is only 80-10, no warc, (160-10 for the s model), but you can receive on 30m with the JJY/WWV button. All you need is a simple 30 xmtr. Change Q4 and Q5 on the rf board from stock 3sk35 to nte454 or such and get much better rx on 10 and 15. These xsistors are in sockets.

If you don't like the analog dial, there are after-market digital readouts available. I prefer analog myself. I love my ts-520! It was also a summer hamfest adoption.

Feel free to eMail me with questions.

Paul KB1GEJ

----- Original Message -----  
From: Harry Hurst <wa3ptg@comcast.net>  
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>



Sent: Saturday, September 14, 2002 7:32 AM  
Subject: TS-520 question

> I picked up an old TS-520 at a hamfest this summer. (What was I thinking?)

-----  
Date: Sat, 14 Sep 2002 10:34:28 -0400  
From: JD Delancy <W1JD@drix.net>  
To: wa3ptg@comcast.net  
Cc: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>  
Subject: [135025] Re: TS-520 question  
Message-ID: <3D8348F4.82E94905@drix.net>  
MIME-version: 1.0  
Content-type: text/plain; charset=us-ascii  
Content-transfer-encoding: 7BIT

Hap

TS520 or a TS520-S? I have a service manual for the 520-S. The 520-S book says "move the brown lead from the SSB terminal to the CW terminal."

jd  
St. Mary's Cnty MD

Harry Hurst wrote:

>  
> I picked up an old TS-520 at a hamfest this summer. (What was I thinking?)  
> Later, I located a CW filter, and installed it -- well soldered it in  
> place. The problem is, I don't have ANY info about this radio, and working  
> on Riceboxes is outside my experience. I need to move a wire to enable the  
> CW filter. Can someone tell me which one?  
>  
> I can build a working radio from scratch, but with this rig, I'm lost.  
> Shudda stuck to homebrew.  
>  
> TIA & 72  
>  
> Hap, WA3PTG  
> Wilmington DE

-----  
Date: Sat, 14 Sep 2002 07:42:04 -0700

From: Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>  
To: "'qrp-1@Lehigh.EDU'" <qrp-1@lehigh.edu>  
Subject: [135026] Re: VF0s and magnetic fields  
Message-ID: <7FD24C15A06DD511BF9E00D0B73E9952047A85E8@az33exm05.corp.mot.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="ISO-8859-1"

>Hum transfer by magnetic field do nothing if the coils are toroidal.  
>Open field coils works like a transformer secondary, the noise will  
>be worst the close it is from the source. Steel plates help the shielding  
>for hum, the right shield material name is mu metal.

>If you really want to check the sensitivity to magnetic fields, just try  
>bringing a magnet near  
>your rig and see what that does to your VF0.  
>Will do nothing if the coil uses a toroidal core.

A toroid core will help, but it does not eliminate the problem. Any toroid core will exhibit one turn of leakage reactance. Now this is much better than a plain old coil, but still allows magnetic field leakage.

The magnet trick will indeed work on a toroid core based VF0. It is an easy thing to do. I have tried it before myself.

Kind of makes you wonder if it might be an alternate method of actually tuning a VF0.....

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

-----  
Date: Sat, 14 Sep 2002 16:01:51 +0100  
From: "Leon Heller" <leon\_heller@hotmail.com>  
To: <Dan.Tayloe@motorola.com>,  
"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [135027] Re: VF0s and magnetic fields  
Message-ID: <DAV25SLXp9YFceWv4SK00012446@hotmail.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

----- Original Message -----

From: "Tayloe Dan-P26412" <Dan.Tayloe@motorola.com>  
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>

Sent: Saturday, September 14, 2002 3:42 PM  
Subject: Re: VFOs and magnetic fields

> >Hum transfer by magnetic field do nothing if the coils are toroidal.  
> >Open field coils works like a transformer secondary, the noise will  
> >be worst the close it is from the source. Steel plates help the shielding  
> >for hum, the right shield material name is mu metal.  
>  
> >If you really want to check the sensitivity to magnetic fields, just try  
> >bringing a magnet near  
> >your rig and see what that does to your VFO.  
> >Will do nothing if the coil uses a toroidal core.  
>  
> A toroid core will help, but it does not eliminate the problem. Any  
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> core will exhibit one turn of leakage reactance. Now this is much better  
> than a plain old coil, but still allows magnetic field leakage.  
>  
> The magnet trick will indeed work on a toroid core based VFO. It is an  
> easy thing to do. I have tried it before myself.  
>  
> Kind of makes you wonder if it might be an alternate method of actually  
tuning  
> a VFO.....

Some thing like this has been done, by an additional winding on the core  
with DC through it. A useful VCO can be made this way, apparently. Magnetic  
amplifiers have used this principle for many years, by varying transformer  
saturation with DC - saturable reactors. They were made by a co. I worked  
for about 40 years ago for controlling motors in steel mills, before SCRs  
came along.

73, Leon

--

Leon Heller, G1HSM  
leon\_heller@hotmail.com  
[http://www.geocities.com/leon\\_heller](http://www.geocities.com/leon_heller)

-----

Date: Sat, 14 Sep 2002 10:44:31 -0500  
From: Nick Kennedy <nkennedy@tcainternet.com>  
To: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [135028] RE: VFOs and magnetic fields  
Message-ID: <01C25BDB.B5B504E0.nkennedy@tcainternet.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Content-Transfer-Encoding: 7bit

Not an expert on magnetic shielding, but coincidentally I happened to be reading an old Terman handbook the other day on the subject. Wish I had it at home.

If I recall correctly, for RF shielding, non-magnetic materials such as copper and aluminum were most effective. The shielding effect worked by setting up eddy currents in the material, which produced fields opposing the unwanted fields. Makes sense that your IF cans are aluminum or brass (I think).

Magnetic materials (steel) were best for low frequency (say, 60 Hz) shielding. They worked by providing a low reluctance path for the fields, shunting them around the shielded component through the walls of the enclosure.

I'll take another look next week and see if I got it right.

On bringing a magnet close to a toroid ... I think I've seen the frequency change just by bringing my finger close. I figured it was due to capacitance to the windings. Or maybe it's my magnetic personality?

On using this principle for tuning---don't think it was a toroid, but I saw Paul Harden using a brass slug inserted into a coil with a leadscrew to tune one of his little desert regens. Tuthill '99.

72--Nick, WA5BDU

-----Original Message-----

From: Tayloe Dan-P26412 [SMTP:Dan.Tayloe@motorola.com]  
Sent: Saturday, September 14, 2002 9:42 AM

The magnet trick will indeed work on a toroid core based VFO. It is an easy thing to do. I have tried it before myself.

Kind of makes you wonder if it might be an alternate method of actually tuning a VFO.....

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

-----  
Date: Sat, 14 Sep 2002 02:25:37 +0100  
From: "k8cv" <k8cv@netzero.net>  
To: "Qrp-L Posts" <qrp-l@lehigh.edu>

Subject: [135029] Fw: QST Free? No, I don't think so.  
Message-ID: <000401c25bff\$399a5940\$1d2e3b41@waltamos>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="Windows-1252"  
Content-Transfer-Encoding: 7bit

Gee, my qst is free, I just put a change of address in for a local LIFE  
MEMBER who became a silent key and it just rolls in .....

You just got to out think them Doug :-)

Hank has always been one step ahead of the rest of us ;-)

Walt Amos K8CV Royal Oak, MI.

----- Original Message -----

From: "Doug Hendricks" <ki6ds@dph.dpol.net>  
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>  
Sent: Friday, September 13, 2002 17:59  
Subject: QST Free? No, I don't think so.

> Hank, if QST is "Free", then how come the cost of membership in ARRL keeps  
> rising everytime postage and printing costs raise? You better believe  
that  
> you are paying for QST. 72, Doug  
>  
>

-----  
Introducing NetZero Long Distance  
Unlimited Long Distance only \$29.95/ month!  
Sign Up Today! [www.netzerolongdistance.com](http://www.netzerolongdistance.com)

-----  
Date: Sat, 14 Sep 2002 16:12:10 +0000  
From: k4vib@att.net  
To: qrp-1@lehigh.edu  
Subject: [135030] RE: Who does have the most stable vfo design?  
Message-ID:  
<20020914161211.LECZ5139.mtiwmhc21.worldnet.att.net@webmail.worldnet.att.net>

I have a 22Mhz dual xtal super-vxo in my 30m simple superhet project. It's  
rock stable and has about 25Khz tuning range. Not sure about spurs as I

haven't had the vxo on a spectrum analyzer but the radio doesn't seem to be any more problematic than the three Small Wonder Labs SWxx+ radio's I've built. The voltage is 8v regulated. It's a Colpitts I believe...but I'd have to go back and look at my notes and verify that.

The IF is 12Mhz.

Bill  
K4VIB

>  
>  
>  
> >From: Harry Hurst <wa3ptg@comcast.net>  
> >Reply-To: wa3ptg@comcast.net  
> >To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
> >Subject: RE: Who does have the most stable vfo design?  
> >Date: Sat, 14 Sep 2002 07:16:18 -0400  
> >  
> >How to build a stable VF0s consistenly is a mystery to me. I have a HB 40  
> >meter superhet with a VF0 that has crystal-control like stability. Then  
> >there is the 20 meter receiver -- 6 MHz. VF0 -- that drifts all over. Both  
> >are similar to W1FB's Notebook projects, JFET hartlys.  
> >  
> >I'd welcome a general discussion of VF0 construction, and a discussion of  
> >kit VF0s. It would be interesting to see what affects stability. What  
> >voltage do the kit VF0s use? What frequency? What type of oscillator and  
> >oscillator transistor?  
>  
> Apart from stability, there are also spectral purity, phase noise, tuning  
> range, cost and power consumption. Some of these requirements are mutually  
> exclusive. 8-(  
>  
> 73, Leon  
> --  
> Leon Heller, G1HSM Tel: +44 1424 14790  
> Email:leon\_heller@hotmail.com  
> My web page: [http://www.geocities.com/leon\\_heller](http://www.geocities.com/leon_heller)  
> My low-cost Altera Flex design kit: <http://www.leonheller.com>  
>  
>  
> -----  
> Join the world s largest e-mail service with MSN Hotmail.  
> <http://www.hotmail.com>  
>

-----  
Date: Sat, 14 Sep 2002 12:28:45 -0400

From: "Joe Everhart" <n2cx@voicenet.com>  
To: "njqrp" <njqrp@njqrp.org>  
Cc: "qrpl" <qrpl@lehigh.edu>  
Subject: [135031] Fw: [NJQRP] Sept NJQRP meeting  
Message-ID: <002301c25c0b\$cceee880\$5e3067cf@n2cxtoy>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Groups,

Well I screwed up the times for the QAF event.

Our NJQRP contest guru has suggested some structure  
to our activities so stay tuned for a further update.

And good things come in two's so doont forget the  
NJQRP Homebrew Sprint either.

See:

<http://www.njqrp.org/data/qrphomebrewersprint.html>  
for details.

Joe, N2CX

-----  
Date: Sat, 14 Sep 2002 10:37:21 -0600  
From: William R Colbert <w5xe@juno.com>  
To: wa3ptg@comcast.net, qrpl@lehigh.edu  
Subject: [135032] Re: TS-520 question  
Message-ID: <20020914.103739.-564007.0.w5xe@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

for an online copy (pdf) of the manual, go to:

<http://www.mods.dk/>

and click on Kenwood at the top of the page, then in the  
left margin you will see a manual selection - click on that  
and scroll down to the TS-520 manual - looks like only  
the Service Manual which should be ok.

GL and you might look at the mods on that site for the 520 and other equipments.

73,

Ray

"Politicians are like nappies. Both should be changed regularly -- and for the same reason"

"Scotsman - Scotsman's Diary 12/97"

Ray Colbert, W5XE, 00TC#3618, SOWP#1064M

SOC#78 ARCI-5784 NCT2R El Paso, (FAR WEST) TEXAS

-----  
Date: Sat, 14 Sep 2002 17:56:02 +0100  
From: "Leon Heller" <leon\_heller@hotmail.com>  
To: "Low Power" <qrp-l@lehigh.edu>  
Subject: [135033] Galena doesn't work!  
Message-ID: <DAV35MvgWezwEgLVAM3000130a7@hotmail.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
          charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

I just can't get that piece of galena to work as a detector. I first got the circuit working with a Ge diode, and then substituted the galena for the diode. The galena has a thick piece of silver-coated copper wire wrapped round it and tightened with a pair of pliers, easier than messing about with Woods metal.

With a 7 dBm 1.5 MHz input, 50% modulated with 1 KHz, and a scope on the output, the Ge detector works perfectly. Substituting the galena detector and probing its surface with the point of a safety pin held in my fingers doesn't result in any diode action whatsoever, anywhere on the surface. There is nothing wrong with the connections to the piece of galena, as putting the Ge diode in series with the probe works fine. Of course, there's an infinite number of points; perhaps I just haven't found the right one.

I've got some very small sharp spring-loaded probes for use with SM parts. I've tried one of those with the galena connected to my DVM on the diode setting, but can't get a stable reading anywhere. Does anyone know which connection should be the anode and which should be the cathode?

Perhaps I ought to return it to the shop and get my 50p back. 8-)

73, Leon

--

Leon Heller, G1HSM



leon\_heller@hotmail.com  
[http://www.geocities.com/leon\\_heller](http://www.geocities.com/leon_heller)

-----  
Date: Sat, 14 Sep 2002 13:07:33 -0400  
From: Bruce Muscolino <w6toy@erols.com>  
To: John Dorson <jdorson@Worldshare.net>  
Cc: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>  
Subject: [135034] Re: Why?  
Message-ID: <3D836CD5.7136C42B@erols.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

John,

I never said I was the smartest person in the world. Thank you for saying that!

I have always tried to relate my side of an issue as clearly and concisely as I can. I try and stay away from obvious (jealous) personal attacks. You, on the other hand, are and will be, known by what you post!

73

>

> Bruce after reading many, many of your e-mail correspondence I think I know  
> your problem.

>

> First you are NOT the smartest person in the world as you try to project.

-----  
Date: Sat, 14 Sep 2002 13:20:08 -0400  
From: Bruce Muscolino <w6toy@erols.com>  
To: wa3ptg@comcast.net  
Cc: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>  
Subject: [135035] Re: TS-520 question  
Message-ID: <3D836FC8.3F40D713@erols.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Harry,

The TS520 is a great old radio. You are to be congratulated on finding a good one. I would suspect you have at least \$175 to \$250 in the radio at this point. Why, then do you insist in trying to modify/troubleshoot it with no documentation?

Operating manuals and service manuals appear regularly on ebay for about \$10.00! Sure, you can get your ONE question answered on this and many other lists. What do you do when the second problem appears!

73

-----  
Date: Sat, 14 Sep 2002 13:32:19 -0400  
From: Bruce Muscolino <w6toy@erols.com>  
To: ki6ds@dph.dpol.net  
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [135036] Re: Who does have the most stable vfo design?  
Message-ID: <3D8372A3.91B0B6CC@erols.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

A good idea, but building these VFO's on perf board will not tell you which is the most stable. VFO stability is composed of many things, among them are component heating, air currents, layout, shielding, and mechanical construction. A VFO design should be evaluated in the setting it is used in! Only that has any real meaning.

I have built a lot of VFO's. I have developed some ideas that have worked for me. They may not work for you! I isolate the tuned circuit from the rest of the VFO with a piece of PC board material. I enclose the entire VFO in a PC board box. I try to derate the components. I use the best quality tank components I can find. All of these tend to eliminate drift from air currents, component heating, and the like.

There is also the issue of mechanical stability. This depends on construction methods. Things cannot be loosely mounted. Solder joints must be secure. A VFO is a total package. It should be designed that way!

7373

-----  
Date: Sat, 14 Sep 2002 13:30:36 -0400  
From: "Alan Fryer" <N3BJ@hotmail.com>

To: <qrp-1@lehigh.edu>  
Subject: [135037] Wanted: Drake 2B  
Message-ID: <OE35Hiv6EybqfAj81EY0000136b@hotmail.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Anyone on the list have a Drake 2B in good shape that is surplus ? Might consider a 2A or 2C, also.

Please let me know.

Alan, N3BJ  
Bent Mountain, VA

-----  
Date: Sat, 14 Sep 2002 12:46:43 -0500  
From: "Rob Matherly" <w0jrm@arrl.net>  
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [135038] Re: TS-520 question  
Message-ID: <007601c25c17\$0e52b620\$8611a541@jimrob>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

I'll make the standard plug for nomanual@yahoogroups.com just in case you need the "regular" manual too :^)

72/73/oo  
Rob, w0jrm

=====  
Visit my website! <http://www.qsl.net/w0jrm>  
=====

----- Original Message -----

for an online copy (pdf) of the manual, go to:

<http://www.mods.dk/>

---  
Outgoing mail is certified Virus Free.

Checked by AVG anti-virus system (<http://www.grisoft.com>).  
Version: 6.0.386 / Virus Database: 218 - Release Date: 9/9/02

-----  
Date: Sat, 14 Sep 2002 13:49:43 -0400  
From: "Mike Yetsko" <[myetsko@insydesw.com](mailto:myetsko@insydesw.com)>  
To: <[leon\\_heller@hotmail.com](mailto:leon_heller@hotmail.com)>,  
"Low Power Amateur Radio Discussion" <[qrp-l@lehigh.edu](mailto:qrp-l@lehigh.edu)>  
Subject: [135039] Re: Galena doesn't work!  
Message-ID: <002801c25c17\$1f98b560\$0300a8c0@charter.net>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

> I just can't get that piece of galena to work as a detector. I first got  
the  
> circuit working with a Ge diode, and then substituted the galena for the  
> diode. The galena has a thick piece of silver-coated copper wire wrapped  
> round it and tightened with a pair of pliers, easier than messing about  
with  
> Woods metal.  
>  
> 73, Leon

When I played with galena as a Cub Scout, I put the piece in a small ring  
of copper pipe. There was a bolt through the pipe and that made one  
contact and held it tight. (I saw this in a picture somewhere, it wasn't  
my  
idea)

If I remember it right, the safety pin I found had to be set up to just  
barely  
touch the galena. Too much pressure and it died. And I had to move it a  
lot. I'd get it to work, and it'd only work for a while, like that day,  
and the  
next day I'd have to position it again.

Someone once told me the problem is you need the pin to make contact  
but NOT break through some surface layer. If you just barely make the  
contact, you get a non-linear junction, but if you break through, then it  
just conducts.

Mike

-----  
Date: Sat, 14 Sep 2002 18:04:08 +0000  
From: k4vib@att.net  
To: qrp-l@lehigh.edu  
Subject: [135040] Re: Galena doesn't work!  
Message-ID:  
<20020914180409.PXDK15461.mtiwmhc22.worldnet.att.net@webmail.worldnet.att.net>

Perhaps there's a thin layer of oxidation on the galena that causes it to act like a diode. Penetrating it with the pin may destroy the diode effect.

Bill  
K4VIB

> > I just can't get that piece of galena to work as a detector. I first got  
> the  
> > circuit working with a Ge diode, and then substituted the galena for the  
> > diode. The galena has a thick piece of silver-coated copper wire wrapped  
> > round it and tightened with a pair of pliers, easier than messing about  
> with  
> > Woods metal.  
> >  
> > 73, Leon  
>  
> When I played with galena as a Cub Scout, I put the piece in a small ring  
> of copper pipe. There was a bolt through the pipe and that made one  
> contact and held it tight. (I saw this in a picture somewhere, it wasn't  
> my  
> idea)  
>  
> If I remember it right, the safety pin I found had to be set up to just  
> barely  
> touch the galena. Too much pressure and it died. And I had to move it a  
> lot. I'd get it to work, and it'd only work for a while, like that day,  
> and the  
> next day I'd have to position it again.  
>  
> Someone once told me the problem is you need the pin to make contact  
> but NOT break through some surface layer. If you just barely make the  
> contact, you get a non-linear junction, but if you break through, then it  
> just conducts.  
>  
> Mike  
>  
>

-----  
Date: Sat, 14 Sep 2002 14:16:24 -0400  
From: Bruce Muscolino <w6toy@erols.com>  
To: W2AGN <w2agn@w2agn.net>  
Cc: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>  
Subject: [135041] Re: Why?  
Message-ID: <3D837CF8.F82F578D@erols.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

John,

I understand that every organization changes. This is because organizations are made up from people, and people change. Very few people stay the same through a career, and many don't stay with the same company for life.

Changes in direction are also understood. An organization takes on a life of its own. It becomes like a real living organism. It wants to survive, and will modify its behavior to do that!

We must recognize these things, and if the organization starts to go in directions we don't want or like, we must try to change its direction!

BTW, I am also a life member of the NRA. I don't like some of the directions it goes either, but on the whole I have a closet full of guns because they have fought for my rights!

73

-----  
Date: Sat, 14 Sep 2002 11:52:18 -0700  
From: "Trevor Jacobs" <kg6cyn@earthlink.net>  
To: <nn1g@earthlink.net>,  
"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [135042] Re: Ref. Datak VFO Kit  
Message-ID: <005001c25c1f\$da66b1a0\$230cf4d8@tjacobs>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Hehehe...for a second there I thought that I'd been wasting my time with the DDS stuff hi! Seems to me that harmonics may be an issue in some

cases also if it's a square wave. Especially if you're going to try and insert the signal into a crystal socket.

Also, Tony had mentioned the digital pots. Very nice little devices. Maxim and Analog Devices may a few different versions of them. Programming them is pretty straight forward. Look at the as unbuffered rail to rail DACs. They do a nice job. I've used them a lot for microstepping stepper motors and they're pretty darn accurate into a high impedance load (> 5K Ohms). For a lower impedance load, you will want to use a buffer such as an op amp to keep it from getting too heavily loaded. Check out Maxim or Analog Devices web site for specific info. They make octal pots as well, replacing 8 pots! Nice little devices. My only issue with them has been the update time, as it takes longer to write to them than a parallel loaded DAC, but this probably wouldn't be an issue for tuning purposes.

73's Trev KG6CYN  
<http://home.earthlink.net/~kg6cyn>  
<http://www.qsl.net/kg6cyn>

----- Original Message -----

From: Dave Benson <nn1g@earthlink.net>  
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
Sent: Saturday, September 14, 2002 8:17 AM  
Subject: Re: Ref. Datak VFO Kit

> Chuck Olson writes:  
>  
> >>  
> A few thoughts:  
>  
> 1) The Linear Technology LTC-1799  
>  
> (<<http://www.linear-tech.com/pdf/1799f.pdf>> for the data sheet)  
>  
> used in the Datak VFO is a square wave output device, a 5 lead surface  
mount  
> part - maybe the Datak VFO has some kind of output filtering ?  
> <<  
>  
> If it's a square-wave output device and frequency is set by a  
resistor, then  
> it's an R-C oscillator. 'Phase noise' will be considerable. While this  
may  
> not be concern at QRP transmitter levels, when used as the local  
oscillator  
> in a receiver you may well find the background noise to be

considerably  
> higher. The 'programmable crystal oscillators' recently available  
suffer  
> from the same syndrome- they use a divided-down crystal reference and  
> phase-lock an R-C oscillator  
> to it. I could clearly see the noise profile on my spectrum analyser.  
Not  
> communications quality!  
>  
> 'LF to 30+ Mhz, clean and stable' is a tall order for a simple  
circuit. 'No  
> free lunch' applies here.  
>  
> 73- Dave, K1SWL  
>  
>  
>  
>  
>  
>  
>  
>  
>  
>

-----  
Date: Sat, 14 Sep 2002 15:14:34 -0400  
From: David Hinerman <WD8CIV@worldnet.att.net>  
To: qrp-l@lehigh.edu  
Subject: [135043] Re: VF0s and magnetic fields  
Message-ID: <5.1.0.14.1.20020914150606.00b171d8@postoffice.worldnet.att.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

>The magnet trick will indeed work on a toroid core based VF0. It is an  
>easy thing to do. I have tried it before myself.  
>  
>Kind of makes you wonder if it might be an alternate method of actually tuning  
>a VF0.....

Dan,

Well, sort of:

<http://www.wenzel.com/pdf/files/crvco.pdf>



describes a wide-range VCO that uses varactors to set the operating frequency and a saturable-core reactor whose inductance is varied with the operating frequency to keep the tank at a constant impedance.

Dave

-----  
"You can fool some of the people all of the time. That's enough to make a living." - Lance Burton  
-----

Dave Hinerman  
WD8CIV@att.net

-----  
Date: Sat, 14 Sep 2002 15:33:04 -0400  
From: "Vincent A. Santis" <vsantis@earthlink.net>  
To: "QRP List (E-mail)" <qrp-l@lehigh.edu>,  
"Tentec (E-mail)" <tentec@contesting.com>  
Cc: "Tentec (E-mail)" <tentec@contesting.com>  
Subject: [135044] Resistor needed  
Message-ID: <01C25C04.1C3ED6A0.vsantis@earthlink.net>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Content-Transfer-Encoding: 7bit

Thanks to all who replied, I have found the resistor.  
Thanks to great membership on these reflectors.

Vince Santis,N1VS  
Winsted, CT  
NEQRP # 598  
PRP-L # 2372  
FISTS# 8053  
CC # 1161  
K1 #841

-----  
Date: Sat, 14 Sep 2002 17:07:44 -0400  
From: "Alan Fryer" <N3BJ@hotmail.com>  
To: <qrp-l@lehigh.edu>  
Subject: [135045] Wanted: Drake R4C  
Message-ID: <0E15h08xWI0AT2JveR6000015dd@hotmail.com>

MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Anyone on the list have a Drake R4C receiver that is surplus to their needs  
? Problem unit OK if it is intact.

Alan, N3BJ  
bent Mountain, VA

-----  
Date: Sat, 14 Sep 2002 18:39:51 -0400  
From: "Vincent Ferme" <vferme@lycos.co.uk>  
To: <qrp-l@lehigh.edu>  
Subject: [135046] WTD: QRP Homebrewer and QEX.  
Message-ID: <001301c25c3f\$a487e660\$77392b18@q9p9p6>

Hi Group,

I'm looking for issues 2 to 8 of QRP Homebrewer, the Journal of the New  
Jersey QRP Club, and QEX issues from May 2001 to August 2002.

Please let me know by private e-mail.

73 de Vince, VA3VF.

-----  
Date: Sat, 14 Sep 2002 17:49:33 -0500  
From: Ed Manuel <edmanuel@directvinternet.com>  
To: qrp-l@lehigh.edu  
Subject: [135047] RE: Who does have the most stable vfo design?  
Message-ID: <4.3.2.7.2.20020914174438.00c0de70@mail.directvinternet.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

A couple of things are worth remembering when pursuing the illusive stable VF0.

1. Stability is a function of the components. For example, as Wes Hayward pointed out, capacitor selection is paramount - not only the correct type, but the quality of the part.
2. Stability is greatly influenced by actual construction technique, including the mechanical aspects of the design, and component layout.

It isn't just about the circuit you use!

Ed, N5EM

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End of QRP-L Digest 2678

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